MAY/JUNE 1996

FAA Aviation News

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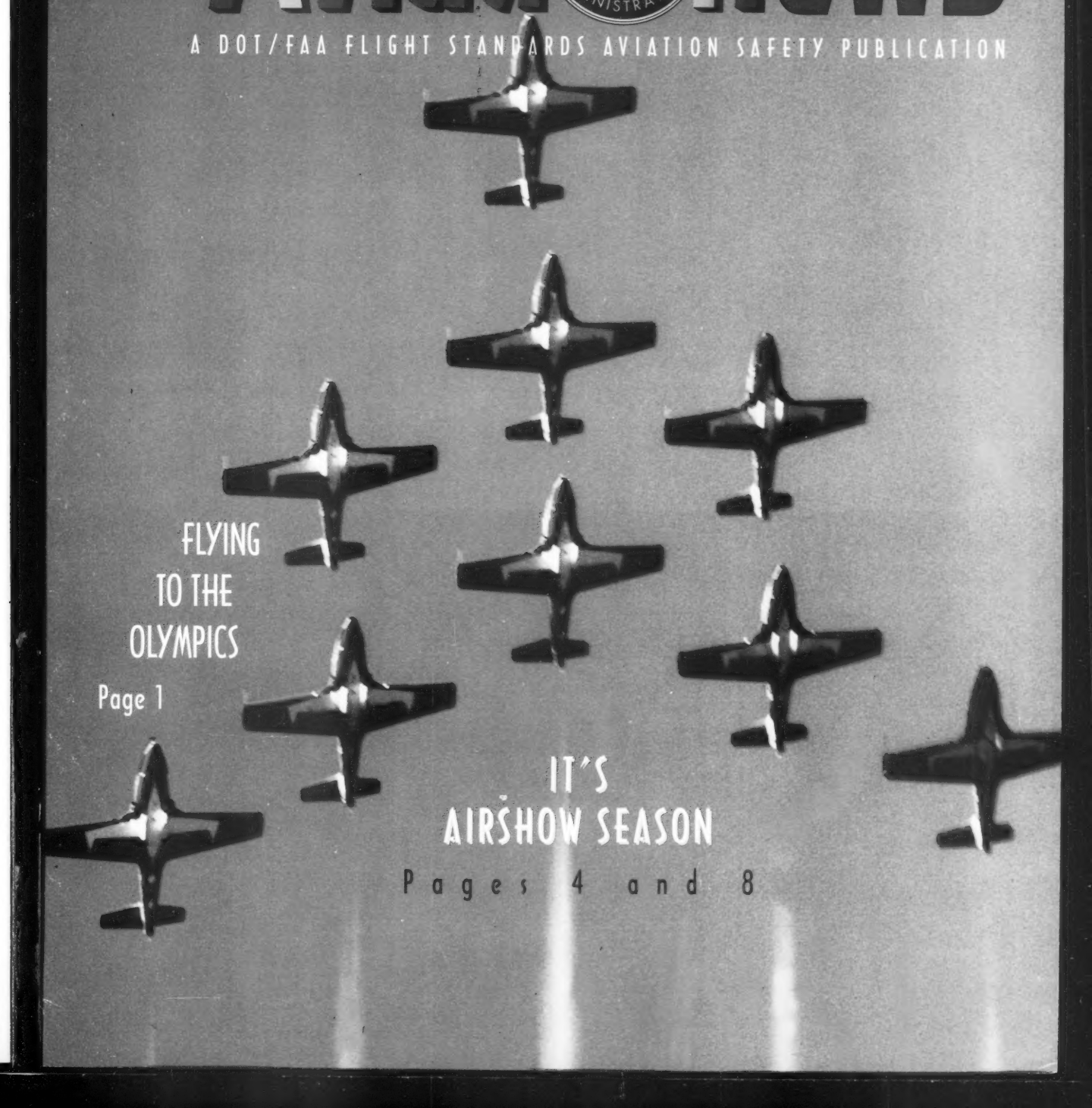

FLYING TO THE OLYMPICS

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IT'S AIRSHOW SEASON

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of Transportation

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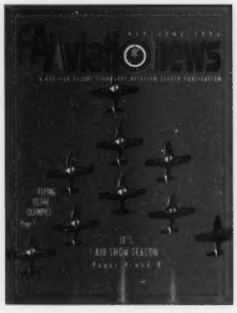
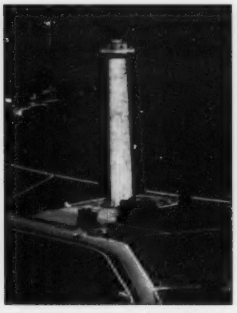
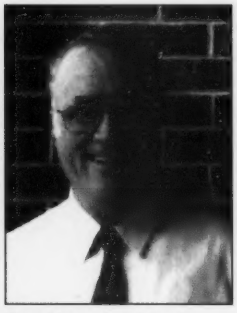


On the Cover: It's Airshow Season... Canada's Snowbirds perform at the '95 Reno Air Races. Photo by Margaret Haldane.



Pilots need to steer clear of the Perry Memorial at Put-In-Bay, Ohio. Page 15.



Read how Joe Marsh convinced a county government that GA airports are good for the community. Page 12.

http://www.faa.gov/avr/news/newshome.htm

GOING FOR THE GOLD

FAA Initiatives in Support of the 1996 Atlanta Centennial Olympic Games

by Janet Apple

"Higher, Faster, Farther" is the motto of Olympic athletes, who strive sometimes against great odds to be, simply, the best and stand upon a podium with gold around their necks and their national anthems ringing in their ears. It can also be said that in order for a modern Olympic Games to be successful, the FAA has set that same "higher, faster, farther" motto as our Olympic goal. Fortunately, when the chips are down and when the whole world is watching, that's not difficult for us. There will be no gold medals for us, and we don't really want any; what we do need is "gold" performance from pilots flying into the area for the Olympic Games. Planning an airplane trip to the Atlanta area for the Olympic Games may seem like it would take the same amount of effort as an Olympic athlete does to prepare. Just like flying into any special event—like Sun 'n Fun or Oshkosh—having as much information as possible assures a swift and efficient operation not to mention a safe one. For some tips on how to make your Olympic flying experience a medal winner, heed the following information.—Editor

FAA Administrator David R. Hinson recently said, "The 1996 Summer Olympic Games will be the largest peacetime event in the history of the world." Starting with the opening ceremonies on July 19, 1996 the Olympic Games expect to attract up to 500,000 visitors daily to the Atlanta area. More than 15,000 athletes and officials will participate in the sporting events of the 100th Olympiad. The Atlanta Committee for the Olympic Games (ACOG) expects that over 3.5 billion people—half the population of the world—will at one time or another view via satellite the Olympic activities and the athletes representing the 197 countries that have accepted invitations to attend.

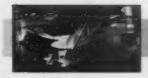
During the Olympic Games, FAA expects more than 3,800 general aviation operations at 11 general aviation airports, and 1,600 air carrier operations daily out of Atlanta-Hartsfield International. This represents a 25% increase in general aviation operations. Air carrier traffic is not expected to add significant numbers of flights. However, the airlines foresee a 100% load factor on existing flights. That is, for every airline seat an Olympic visitor—if need be!

FAA initiatives to manage the expected increase in air traffic operations are designed to make traveling to and from the Games a positive experience for the aviation customer. These initiatives include:

- Additional security agents at air carrier and G/A airports in all Olympic cities to support local law enforcement to speed up the security screening process;
- Special Federal Aviation Regulations (SFAR) No. 74 that details temporary flight restrictions (TFR) and flight operations requirements for the Olympic Games to assure the safety of the airspace over Olympic venues;
- Air traffic control services at airports that are normally uncontrolled to expedite arrivals and departures; and
- A joint FAA and industry initiative to display advanced technology called Atlanta Short-haul Transportation System (ASTS).

Security

Since September 1991, FAA's Office of Civil Aviation Security has been part of the security planning by ACOG. FAA has worked closely with other Federal, state, and local law enforcement agencies to develop aviation security plans



for the Games. FAA security and intelligence personnel meet regularly with other law enforcement agencies to develop current and future threat information. Determinations concerning the level of security constraints will be made depending on the most current assessments of local and world conditions.

FAA security site coordinators and agents will coordinate all on-site activity at airports serving venues before and during the Games. They will ensure that all security measures are implemented.

Temporary Flight Restrictions

SFAR No. 74 has been established to define areas and explain the slot reservation process. This regulation is necessary for the security of the venues, safe operation; management of aircraft operating to, within, and from these areas; and prevention any unsafe congestion of sightseeing and other aircraft over the various game sites. SFAR No. 74 is applicable May 15 through August 11, 1996.

For safety and security reasons, there will be TFR areas around the venues and the Olympic Villages. In downtown Atlanta, flight will be restricted within a three nautical mile radius around the Georgia Dome and a one nautical mile radius around the Olympic Village, up to and including 3,500 feet MSL. Pilots should check Notices to Airmen (NOTAM) for area descriptions, effective dates, and times of all restrictions. Requests for access to the airspace areas can be obtained by contacting the designated using agency for the particular venue, as designated in SFAR No. 74 or via NOTAM.

Starting this past March, special Olympic charts were published, depicting these restricted airspace areas. The charts are available from normal charting sources.

Slot Reservation Requirements

Slot reservations are required for IFR arrival and departure flights at 11 designated airports. Those airports are:

1. Clayton County-Tara Field Airport (4A7), Hampton, GA
2. Cobb County-McCollum Field Airport (RYY), Marietta, GA
3. Covington Municipal Airport (9A1), Covington, GA
4. DeKalb-Peachtree Airport (PDK), Atlanta, GA
5. Ben Epps Field Airport (AHN), Athens, GA
6. Peachtree City-Falcon Field Airport (FFC), Peachtree City, GA
7. Fulton County Airport-Brown Field Airport (FTY), Atlanta, GA
8. Lee Gilmer Memorial Airport (GVL), Gainesville, GA
9. Gwinett County-Briscoe Field Airport (LZU), Lawrenceville, GA
10. William B. Hartsfield Atlanta International Airport (ATL), Atlanta, GA
11. Richard B. Russell Airport (RMG), Rome, GA

Slot reservations are required for VFR arrival and departure flights at four designated airports. Those airports are:

1. Cobb County-McCollum Field Airport (RYY), Marietta, GA
2. DeKalb-Peachtree Airport (PDK), Atlanta, GA
3. Fulton County-Brown Field Airport (FTY), Atlanta, GA
4. Gwinnett County-Briscoe Field Airport (LZU), Lawrenceville, GA

The reservation program applies to fixed-wing aircraft and does not affect regularly scheduled commercial airlines.

May 15 through June 30, 1996 foreign and domestic charter and cargo operations not published in the Official Airline Guide (OAG) as of June 30, 1996 may obtain a slot reservation to land or depart IFR from the 11 designated airports. Reservations may be made by foreign and domestic charter and cargo operators during this 45-day period by facsimile at (770) 946-7938 or via Internet address atcslots@mail.hq.faa.gov . A response to these requests will be provided within 72 hours. No slots will be accepted or issued July 1 through July 13, 1996.

Beginning July 14, 1996 at 0700 (EDT) all operators can reserve VFR and IFR arrival and departure slots by calling 1-800-96FAA96. Reservation agents will be on duty 24 hours a day and will issue slots immediately.

FAA requests the numbers and Internet address be used only for reservations and not inquiries concerning

Information Resources

1. SFAR No. 74 information may be obtained from Janet Apple, Air Traffic Rules Branch, at (202) 267-8783.
2. Aviation inquiries may be addressed to Steve Alogna, FAA Olympic Project Manager, at (404) 305-5051 or Steve_Alogna@mail.hq.faa.gov.
3. News media inquiries may reach Kathleen Bergen or Christy Williams at (404) 305-5100 or Kathleen_Bergen@mail.hq.faa.gov; Christy_Williams@mail.hq.faa.gov.
4. Slot reservations for foreign and domestic charter and cargo operators may be obtained from May 15 through June 30, 1996 on fax (770) 946-7938 or via Internet atcslots@mail.hq.faa.gov
5. Slot Reservations for all operators (except scheduled air carrier flights in the OAG by June 30, 1996) may be obtained from July 14 through August 11, 1996 by calling 1-800-96FAA96.

housing, tickets, parking, or non-slot related information.

Air Traffic Control Services

The FAA will increase staffing at several airport traffic control towers in the Atlanta area to provide the best possible service. The Atlanta Air Route Traffic Control Center and the Atlanta Airport Traffic Control Tower will each add several control positions to assist in the handling of Olympic traffic. Staffing will be increased at several airport traffic control towers in the Atlanta area to ensure the best possible service is provided.

Temporary towers will also be established to handle the increased air traffic. From July 15 until August 6, 1996, the FAA will provide temporary ATC services at:

- Clayton County-Tara Field (4A7), Hampton, GA
- Covington Municipal Airport (9A1), Covington, GA
- Peachtree City-Falcon Field Airport (FFC), Peachtree City, GA
- Lee Gilmer Memorial Airport (GVL), Gainesville, GA
- Richard B. Russell Airport (RMG), Rome, GA
- Hilton Head Island Airport (49J), Hilton Head, SC

Information on hours of operation and tower frequencies will be available in the SFAR or via NOTAM.

Airport parking is undoubtedly going at a premium so pilots would be well advised to make their parking reservations with the local fixed base operators now. Don't forget to ask about the availability and cost of tie-downs chains or ropes; you may have to bring your own.

Weather

Summer is the thunderstorm season in the Southeast. Adverse weather occurs with little or no notice. Be sure to review procedures and techniques for flying near hazardous weather and, preferably, avoiding them. Tickets for events are expensive, but so are the lives of you and your family and the cost of your aircraft. Don't press on into weather you can't handle in an attempt to make an event on time.

Weather briefings are available as usual by calling (1-800) WX-BRIEF. Also consider DUATS for preflight information and Flight Watch (122.0) for inflight updates. Inflight weather information is also available in the form of Severe Weather Forecast Alerts (AWW), Convective SIGMET's, SIGMET's, Center Weather Advisories (CWA), and AIRMET's. Refer to the *Aeronautical Information Manual* on times and method of broadcast of these hazardous weather alerts.

Atlanta Short-haul Transportation System (ASTS)

The ASTS is a joint FAA and industry initiative that will apply Global Positioning System (GPS) technology to transport goods and provide public safety services around Atlanta by helicopters on low altitude helicopter routes. FAA will fund the purchase of GPS data-link equipment for up to 50 participating law enforcement, industry, and ACOG aircraft that will allow equipped aircraft to "see" via cockpit display similarly equipped aircraft, thereby enhancing normal VFR procedures. This data-link information will also be transmitted to ground stations where FAA controllers will provide VFR advisories for participating aircraft and assist law enforcement and emergency management officials in the event of problems. FAA expects this demonstration will have national applications for other urban areas where delivery of essential goods is a priority.

The Olympic Games are always a thrill to watch, and to have the 100th anniversary of the modern games in the U.S. is something for all of us to be proud of. All of FAA is prepared for a safe yet efficient operation, and we know all the pilots flying into the area are ready for the same.

The eyes of the whole world are on us. Let's add some aviation "gold medals" to our athletes' achievements.

Ms. Apple is an Air Traffic Control Specialist in the Airspace and Rules Division at FAA headquarters.

Olympic Information Change

There has been a change notice issued for the Olympic Games 1996 NOTAM dated May 15 through August 11, 1996. For copies of the NOTAM and change, readers can write to the following address: DOT/FAA Southern Regin, Attention Mary Abbott or Mary Sergent, 1701 Columbia Avenue, College Park, GA 30337. You may FAX your request and address to (404) 305-5572, Attention AS-531A.

Readers should check their local Flight Service Statin for any new or additional NOTAM's concerning the Olympic Games.

Readers are reminded that there are special temporary flight restrictions over all of the Olympic competititon sites this summer. Pilots planning on flying to any of the Olympic locations must comply with the procedures outlined in the Olympic Games 1996 NOTAM and any subsequent change.

AIRSHOW PERFORMER FAQ

The 27 Most Frequently Asked Questions of an Airshow Performer

by Patty Wagstaff

Is it true? Is it airshow season again?

The winter has faded into the past with little warning, especially here in the Southwest. Last November it seemed like I had forever to enjoy the off season. I had tons of time to enjoy the comfort of my own home, work in my own kitchen, and reacquaint myself with hometown friends. I could relax! I finally had time to unpack my suitcase completely and arrange my closet, to kick back and forget about hotels that all smell and feel the same. Ah, what luxury.

But, alas, it is that time again. My precious off season months are little more than an elusive dream.

For an airshow performer, spring is the time to get ready for the road. We clean out our flight bags, learn how to read a sectional again, and get our road shows back on line. At Patty Wagstaff Airshows, Inc., we've spent the winter annualing the *Extra* 300S, rebuilding the engine, putting new tires on the van. We updated our press materials, sent letters and pictures to our loyal sponsors, and wrote a newsletter. We went to the International Council of Air Shows (ICAS) convention in Las Vegas and booked our slate of appearances. We even tried to put together a schedule that makes us feel like an airshow team rather than a crew of yo-yo's with a schedule that flows not bounces. We loaded the van and the classic Airstream trailer with flight suits and brochures; the tool box and spare parts; and the cylinders, magnetos, and cases of 15/50 oil.

Then, it was time to sit down with my crew and discuss logistics—one of the most challenging parts of a performer's life. I fly my airplane to airshows, but who drives the van to which show and when? Who will have time off? (I know it won't be me!) Preparation is the key. Anything we take care of at home base makes our life easier on the road when we are hard to reach and busy with the flying end of the airshow business.

With statements like, "I can't believe you do what you do with that plane!" and "Do you really know Bob Hoover?" one of the biggest things an airshow performer has to deal with at an airshow are the millions of questions about what we do. So, as my crew and I and my fellow performers head out on the circuit for another airshow season, I would like to take the time to try and answer *The 27 Most Frequently Asked Questions of the Airshow Performer*.

1. What are those triangular things on the ends of your wings?

They are specifically designed to spike or impale people that get too close to the plane and touch it.

I am joking, but, well, people never try to touch concept cars at a car show, why do they want to fiddle with my airplane?

Actually, I hardly blame them. My *Extra* 300S is such a beautiful piece of machinery with its smooth, marble wings that I can't resist running my hands along its leading edges myself.

The triangular pieces on the ends of the wings are called "Sight Gauges" or "Sighting Devices." They are a visual attitude indicator used primarily in competition where each maneuver is judged for precision and perfection. Lines must be either 90 degrees or 45 degrees to the horizon, so heading straight up and down and making perfect vertical rolls requires a little help.

We need these "cheaters" to establish our reference to the horizon. When the pilot is going vertical, the piece of the sight gauge that looks vertical on the ground runs parallel to the horizon. You'll see them in the form of triangles or squares, depending on the airplane. Competition pilots are really fussy about how perfectly—to the nth degree—these sights are lined up, so we understandably get a little nervous when people grab and shake them and say, "Is this for hanging your pantyhose on? Ha, ha, ha!" We'll smile politely and say no, but inside we're cringing.

2. Do you really fly that thing, little gal?

Yeah, big guy, amazing that little ole me can handle this big ole airplane and not even break a nail!

Well, that's the answer this question deserves.

3. What is your airplane made of?

Really expensive stuff!

Until about 1986 aerobatic airplanes were made of wood and fabric, but with the advent of plastics and composites, not to mention the Russian *Sukhoi*'s and the German *Extra*'s, aerobatic airplane manufacturers started using composite materials. Although I have a steel tube frame fuselage, my wings and empennage are made of a combination of carbon fiber, Kevlar, and Fiberglas. The panels, like the cowl and turtledeck, are also composite which give it the lightweight strength that "akro" pilots are always looking for.

4. Is your propeller metal?

No. Metal propellers on high performance aerobatic airplanes stress the engine's crankshaft. There have been several crankshaft failures because of the high stresses put on them from multiple snap rolls and tumbling maneuvers like iomcevaks. We prefer to fly with lightweight composite or wood propellers. A lot of akro pilots fly with the German MT made of laminated wood and Fiberglas. I prefer my three-bladed Hartzell made of Kevlar with a stainless steel leading edge for its strength and superb performance. I can fly in the rain with it unlike other composite propellers, and the Kevlar even makes it bulletproof! You never know when that might come in handy.

5. What are those things hanging off your ailerons?

They are for parents to let their children swing on at airshows.

Okay, okay, I'll be serious. They're called shovels or spades, and they are not for gardening. Because a good aerobatic airplane has such large ailerons—almost the full span of the wing—we need something to help boost and lighten our controls. Spade design is a black art—you see all kinds of shapes and all sizes depending on the airplane. Akro pilots are always tweaking them to get the control feel just right—not too light and not too heavy. I've flown without spades, and it was like driving a Mack truck; not good for aerobatics.

Philip Handleman Photo

6. Do you fly your plane yourself to airshows or do you truck it?

Some pilots like Jimmy Franklin and Suzanne Oliver, take their biplanes apart and truck them to each show, but they are flying open cockpit, slow biplanes. Both have been in the airshow business a long time and have paid their dues flying cross-country and sitting in FBO lobbies. I fly a monoplane designed specifically for competition with a one-piece wing. It's not so easy and quick to take apart.

I enjoy flying cross-country from a sightseeing standpoint and because I can get where I'm going—fast! The *Extra* is the luxury car of the skies. I have a stereo plugged into noise-canceling headsets, a molded seat, and electric rudder pedals, so I can hit a couple of toggle switches and slide my feet out and stretch my legs. It's really comfortable, and I love the solitude of being alone at 7,500 feet above the madness below.

Besides, it surely beats airline terminals.

7. How much range and endurance do you have?

Not enough!

I have a total capacity of 45 gallons of 100LL, and I like to be on the ground after about two hours in the air. With a fuel burn of approximately 19 gallons an hour, that leaves me about nine or 10 gallons to spare—a good half-hour reserve. I don't like to push it. I get real nervous thinking about being low on fuel!

8. How does your crew get around to airshows?

My assistant and crew chief, Karen Roberts, allows the rest of the crew to follow her in the van at a respectful distance! Seriously, logistics are one of our most challenging demands. At the beginning of the season, we outline a plan of attack. The company van needs to be at each show with its cargo of spare parts, tools, ribbon cut poles, and my flight suits.

I also need a crew member at each show so Karen and another assistant can balance driving and crewing. I'm not the only one whose fatigue affects safe performance. I also have to make sure the crew gets home once in a while. Karen wants to make sure her husband, Mike, and her kids don't forget about her! I, on the other hand, am on the road solid for up to three months at a time.

We make numerous airline reservations and changes of plans during the season. I now understand what airlines go through with crew scheduling!

9. Wow, your airplane is open at the bottom! Is that for air conditioning?

It's not open, though it appears to be. I actually have a large Lexan panel on the belly of my airplane, and, no

thank you, I have enough air conditioning seeping through the vents and canopy to suit me just fine, especially at altitude on a cold day. The panel on the belly and sides of a lot of competition aerobatic airplanes is so we can see the aerobatic box markers on the ground in competition. It's hard enough to stay inside a 3,000 square foot cube of airspace that looks like little more than a postage stamp from 2,000 feet AGL without having any way to see it through the wings of an airplane!

You might notice a small Lexan panel below the elevator, above the tailwheel. It is there so I can inspect the control linkages and to look for any FOD that may have found its way back to the tail. Because aerobatic airplanes generally have no bulkheads to prevent things like, say, beaded earrings, passports, and wrenches from finding their way to the tail, we have to be especially careful about what is floating around inside the cockpit. A control jam, especially at low level, is no fun and can ruin a perfectly good day.

I do have a little heater for cross-country flights, but don't tell any of my fellow performers. They'll be jealous!

10. (While pointing to the airplane) Is that a toy?

No, my airplane is not a toy. It's a business tool. Just ask my accountant.

11. So, who is your major sponsor?

Read my wings!!!

12. How many shows a year do you fly?

Because I balance airshows with competition, I fly between 15 and 18 shows a year. Some performers fly up to 30 airshows a year. Each show requires about three to four days of participation, so that's a lot!

13. What do you do in the winter during your spare time?

What is "spare time?"

Seriously, most of us try to keep in shape during the winter—riding bikes, skiing, going to the gym. Winter is also time to catch up on paperwork, finding new sponsors, and keeping existing ones up to date on our activities. Winter goes very quickly for the airshow performer.

14. How often do you fly?

As often as possible!

After 12 years of airshows and competition flying, it never loses its charm for me. I take December, January, and February off from aerobatics, flying enough to keep up my G tolerance. And, like most performers, I take advantage of the winter to fly other airplanes or helicopters, and to do a little instruction.

My training begins again in earnest in early March. I start off by flying once a day for a week, then twice a day, and after several weeks start flying three times a day, especially if my coach is in town. Each flight is about 20 to 30 minutes of intense aerobatics. The 10 positive and seven negative G's I pull take their toll physically, so the akro pilot has to build up to a good G tolerance carefully and slowly.

15. How did you learn to fly so low?

I'm at 1,500 feet, I swear!

Seriously? Practice, practice, practice!

I usually tell people that we don't start our education in high school; we start in kindergarten, and that's the way I've approached aerobatics. When I first started aerobatics, I flew very high and learned the maneuvers. It took me five years of practice, experience, and seeking advice to do the 22-foot AGL inverted ribbon cut.

As you gain experience and ability, you start bringing maneuvers lower and closer to the ground as your competence allows. I started with lower altitude rolls because I knew I could do a roll 10 times out of 10 without falling out of it. Then, I started doing Immelmans and Cuban Eights closer to the ground.

FAR § 91.303 states that no person may operate an aircraft in aerobatic flight over any congested area of a city, town, or settlement; over an open air assembly of people (sounds like an air show to me!); within the lateral boundaries of Class B, C, D, or E airspace for an airport; within four nautical miles of the centerline of any airway; below an altitude of 1,500 feet AGL; or when flight visibility is less than three statute miles.

So, how do we practice? Aerobatic pilots practice in waivered airspace or "boxes." These are areas designated by the FAA by waiver, after an evaluation of the safety considerations, and are where a pilot can practice for competition or airshows down to the surface. These boxes are not indicated on charts, so checking NOTAM's or the *Airport/Facility Directory* is important for non-akro pilots transiting the boxes. Traffic vigilance on my part—and yours—is important when I'm practicing and you may be transiting.

To fly at an airshow or in front of "an open air assembly of people" below 1,500 feet AGL takes a special waiver from the FAA. The ACE program, administered by the airshow industry, uses the experience of established aerobatic pilots to recommend pilots, wishing to fly airshows, for their "Low Level Competency Cards." The program uses a stepping stone approach, so the pilot's first waiver will allow them to fly at 800 feet AGL or above. As the pilot gains more experience at recognized airshows, the pilot's "floor" will be lowered.

16. What do you look at when you're so low?

The ground. I don't want to hit.

17. What about when your engine stalls?

The engine doesn't stall—at least I hope it doesn't. The wings do. Amazing, isn't it, that I can go straight up at a 90 degree angle to the horizon at zero airspeed and not stall! Go figure.

(Actually, it's because even in that attitude and that airspeed I haven't exceeded the critical angle of attack. Remember that?)

18. Do you ever get scared?

No, I don't like to scare myself. Fear scares me. Preparation, procedures, training, and maintenance are

what you need to overcome fear. Fear you deal with on the ground because it is counterproductive. In the middle of a performance or a competition, there isn't any room for it if you have a problem. Especially with aerobatics I have to continue to fly the airplane.

But, there was this time I was flying cross-country and the weather got so bad...Well, that's another story.

19. Don't you get disoriented?

All the time and especially at these motels. They all look alike! How am I supposed to tell what city I am in when I wake up in the middle of night?

Seriously, practice and proficiency help overcome the possibility of disorientation.

20. Do you wear those earrings when you fly?

Yes. They're my G meters. They let me know when I'm upside down by flopping upwards. When they hang straight down, I know I'm upright, straight and level.

I recently flew at the Phoenix 500 Airshow where a camera, antenna, and transmitter were mounted inside the cockpit. During my performance the transmitter broadcasted a live signal to "Jumbotron" television screens on the ground. Everyone could see I was wearing my earrings!

21. Why do you do this?

A. Because I'm crazy.

B. Why not?

C. For the incredible amount of money an airshow pilot makes.

D. All of the above.

You pick the answer.

Truthfully? Because aerobatics combines everything I love—the beauty of flight, machinery, a constant challenge, travel, people, tumbling, and floating.

22. Your husband lets you do this?

"Lets" me do this?

23. Do you ever get sick?

Yeah, of all these questions.

Just kidding. Read on.

24. Do you like to fly?

No, not really. I just like beating myself up day after day for no good reason and spending years on an activity I don't enjoy. I guess some people would call that a job?

Luckily, I and all other airshow pilots are in love with our jobs!

25. Are you crazy?

I sometimes answer this question by saying, "Isn't it obvious?" and laugh, but as good natured and well intentioned as that may be, the question makes us performers and competitors uncomfortable. Sure, we're trying to entertain and thrill you with wild flying, stunts, and incredible feats in the air. But this takes practices, folks. This is truly precision flying at its finest, and it takes hours and hours and hours to learn how to do the maneuvers you see at an airshow and years to learn how to fly them low enough for you to see.

And, by the way, I've only known a couple of crazy people involved in airshows, and they're not around anymore.

26. What does your family think?

Consider this: My family thinks this is the only normal thing I've ever done. Enough said!

27. How long will you do this?

Do you ask your dentist how long he or she will do the job? How about your plumber or carpenter?

Here's the reality of it. You're not dealing with completely normal people here—in the opinion of some. Airshow performers are pilots, entertainers, wanderers, minstrels, business people, and dedicated professionals all rolled into one. It's just that we've chosen a lifestyle that isn't tied to a desk from nine to five.

Still, at the end of the season, I'm ready for a break. I get excited about staying home, doing other things, cooking, veging in front of the television, catching up with friends. Then, in a week or two I start getting phone calls from other performers. We talk about how wonderful it is to be home, but, sure enough, IT creeps into the conversation—we admit to each other that we're a little restless, that we miss being on the road. We laugh at each other and tell ourselves we're really in trouble, we're sick! But what can we do? It's in our blood.

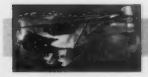
So, we're polite when people ask how long we'll be in the business. We say things like, "As long as we're invited back to perform." or "As long as I feel like it." or "As long as I find beauty in aviation." They are all true replies. But being an airshow pilot is in some ways a lifestyle choice moreso than a job. It's a passion and maybe a disease, and though it's not something we put a time limit on, we're usually the kind of people who don't mind moving on when the time is right.

I don't know what I'll do in the future or how long I'll be an airshow pilot, but for now, like the barnstormers before me, I'll be flying for and meeting thousands of people at airports across the country and enjoying every minute of it.

And by the way, I know some of my answers are flip, but the questions aren't. Airshow performers get all kinds of questions, some more esoteric than the ones I've listed here, but, then, we expect them. That's what airshows are all about—sharing aviation with pilots and non-pilots, old folks and kids. When the spectators stop asking questions and wondering about what we do, why we do it, and how we do it, we'll be out of a job.

So get out your lawn chairs and sunblock and stock your coolers because we hope to see you at an airshow soon!

Ms. Wagstaff has won too many accolades for us to list here, the most recent of which was the ICAS Sword of Excellence. Take it from another "little gal" who flies—though not aerobatics—those earrings make good turn coordinators, too.



by Philip Handleman

Ruminations on Air Show Flying

The legendary Bob Hoover is probably the country's most prolific air show performer. He executes his routine with such precision that you can actually overhear grumblings from the full-price bleachers that the performance is, ahem, boring. This startling viewpoint, emanating exclusively from the aeronautically untrained in the audience, apparently stems from the notion that predictability chokes excitement.

Of course, the pilots watching such an air show act do not subscribe to this conception. Most pilots, as mere mortals who have not jousted in the unbounded three-dimensional arena of the sky or nursed malfunctioning prototypes down to the saving grace of a dry lakebed, are content to amble forth in the comfort of the straight-and-level configuration. If the truth be told, many in the flying fraternity face a brisk crosswind on landing with white knuckles and sweaty palms. When such conditions prevail, returning to Mother Earth with a little zig-zagging down the runway and just a bounce or two constitutes an achievement.

The majority of the aviating community knows remarkably well from its experience that the hallmark of superb air show flying is consistency. Making the airplane correctly trace the same demanding maneuver each and every time—like perfectly rounded loops, perfectly coordinated lazy eights, and, yes, perfectly smooth landings—represents the utmost in pilot skill and is a quality to be revered, not dismissed.

Since the time of Lincoln Beachey, America's first loop-the-loop artist, innumerable enthusiasts have aspired to thrill air show audiences. In fact, any clumsy wannabe with an immunity to motion sickness can, at the required altitude minimums, reef over an aerobatic trainer in an oblong loop and safely recover. In a few weeks filled with training sessions the fledgling aerobat may expand his or her repertoire to include such basic maneuvers as spins, hammerheads, cloverleafs, and a variety of rolls. In the beginning, this novice may once in a while execute a maneuver with precision. The development of exactitude, in turn, leads to an inner confidence. This is fine, actually healthy, up to a point. When confidence spills over into arrogance, the pilot is spoiling for an accident. Air show flying is, virtually by definition, exhibition flight in the low-to-the-ground environment, and there is simply no margin for error.

The standard refrain to student pilots about the unforgiving nature of the sky takes on added significance in air show flying, for here the tolerances become ever so thin. Honesty—the recognition that one, no matter how talented, is unable to outwit the omnipotent physics of the sky—serves as the foundation to making it on the air show circuit. To succeed, indeed, to survive the air show pilot must understand the ubiquity of the controlling force and the absolute rigidity with which the rules are imposed. There can be no bluffing, no deviation from what works, not a single exception.

Some air show aspirants have approached the sport with the idea that a one-time mastery of the maneuvers in their respective routines is all that is required. From that point forward, so they think, the maneuvers will fall into place each time they perform. But, of course, the real world does not work that way. A performer's experience level must be maintained with near religious fervor. Many performers who get into trouble, and whose tragic encounters are conveyed via shaky home video to a television-addicted public strangely fascinated by the macabre, are the least experienced or are, to borrow a euphemism of old-time air show pilots, those who are "young."

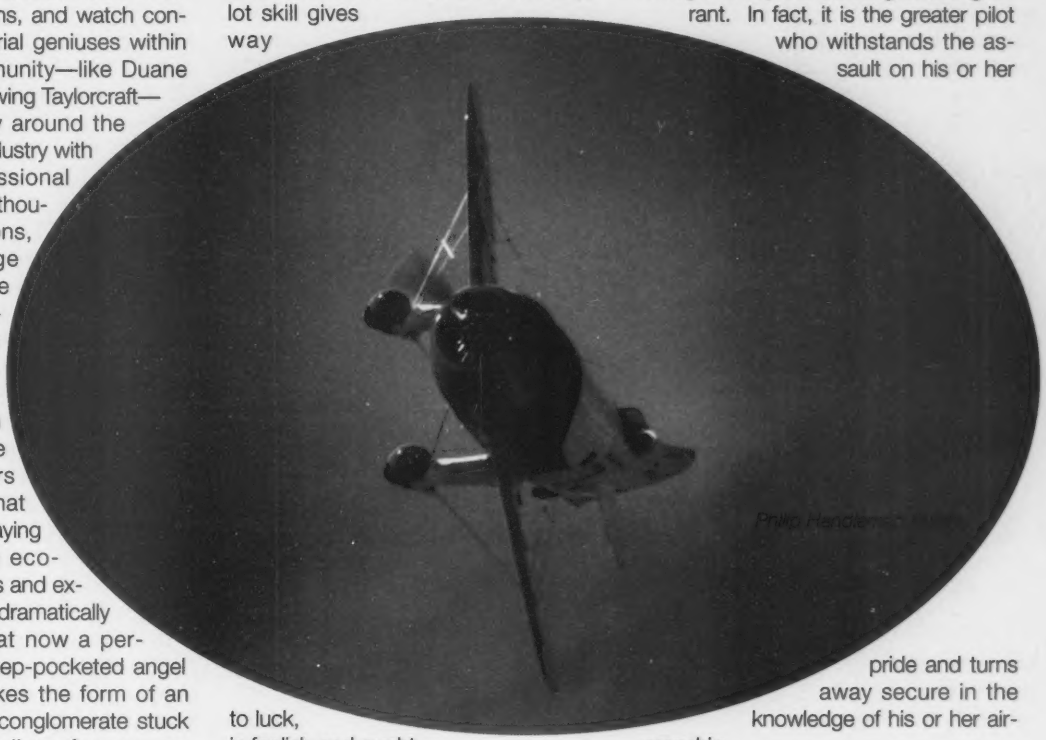
Performing low-level aerobatics on a few summer afternoons is, quite frankly, not enough to ensure the all-important virtue of consistency. Taking such an attitude into the world of air show flying will lead, almost assuredly, to harrowing moments. Air show flying demands overwhelming commitment from the performer. Many pilots have the underlying abilities to be air show performers; the essential ingredient of dedication seems to be the elusive factor.

Like the Olympic contender, there has to be an allocation of time everyday to at least contemplate the goal. Training and more training is the prescription for success. If air show flying is not going to be a full-time occupation, then it should be at least a full-time avocation. If one is unwilling or unable to devote the requisite time and energy with the attendant sacrifices that go hand-in-hand with air show flying, then there is always the logical and safe substi-

tute of sport aerobatics high up in a practice area, perhaps with a friend or relative tagging along, on good weather weekends.

Sometime in the life of air shows, these aeronautical events subtly changed from cozy affairs where the air-minded gathered on grass fields to mingle among friends, fawn over sparkling restorations, and watch contentedly as the aerial geniuses within the aviating community—like Duane Cole in his clipped wing Taylorcraft—zoomed gracefully around the sky to a certified industry with an array of professional promoters. Now, thousands, even millions, of dollars change hands. What once was a kind of aviator's county fair is increasingly a legally complex, insured, high-tech carnival in which the brilliant performers are but the lure that draws a mass of paying spectators. The economics of air shows and exhibition flying have dramatically changed such that now a performer needs a deep-pocketed angel which typically takes the form of an amorphous global conglomerate stuck on hawking some line of consumer goods. Sadly, in competitive pursuit of these scarce sponsor dollars, aspiring performers have been known to compose wild and risky routines.

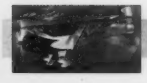
One time in Texas before a big crowd, a highly competent team performer seeking to strike out on his own decided to make a name for himself and attract that elusive corporate sponsorship by rolling his old, souped up biplane inverted, diving to the runway centerline, and holding his aircraft there with minimal ground clearance for the length of the runway. When the tip of his biplane's vertical stabilizer came to within six inches of the concrete, seasoned air show veterans averted their eyes, expecting the onrushing energy to splatter into a ball of fire. Much to their relief, the substantially modified antique pulled up in its upside-down mode at the far end of the runway and swung positive. The performer got his sponsorship, but, oh my, what an audition! Clearly, this is not recommended, and, ironically enough, most of the spectators did not notice the death-defying extreme. Stretching the envelope to the point of recklessness, where pilot skill gives way to luck, is foolish and ought to be avoided.



Over the years, it has become evident that usually the most vulnerable element on the flight line is not an airplane's wing spar or wheel strut, but the pilot's pride. No air show pilot should ever forget the story of fabled British ace Douglas Bader. Performing stunts as a young, cocky RAF officer in the 1930's, the brash Bader was goaded into performing a low-level roll, that perennial nemesis of exhibition pilots, in a cumbersome and unfamiliar aircraft. Unable to complete the roll, the plane dished out, ramming into the ground and resulting in injuries to Bader which necessitated the amputation of both of his legs.

Taunts of "chicken" or insinuations of cowardly flying, even if only muttered in barely discernible tones, can too easily cloud a pilot's judgement and motivate him or her to engage in precisely the kind of unsafe flying that in any other circumstance the same pilot would abhor. It takes an inner strength, an invisible shield around one's pride, to resist these sorts of temptations brought on by the cunning or the ignorant. In fact, it is the greater pilot who withstands the assault on his or her pride and turns away secure in the knowledge of his or her airmanship.

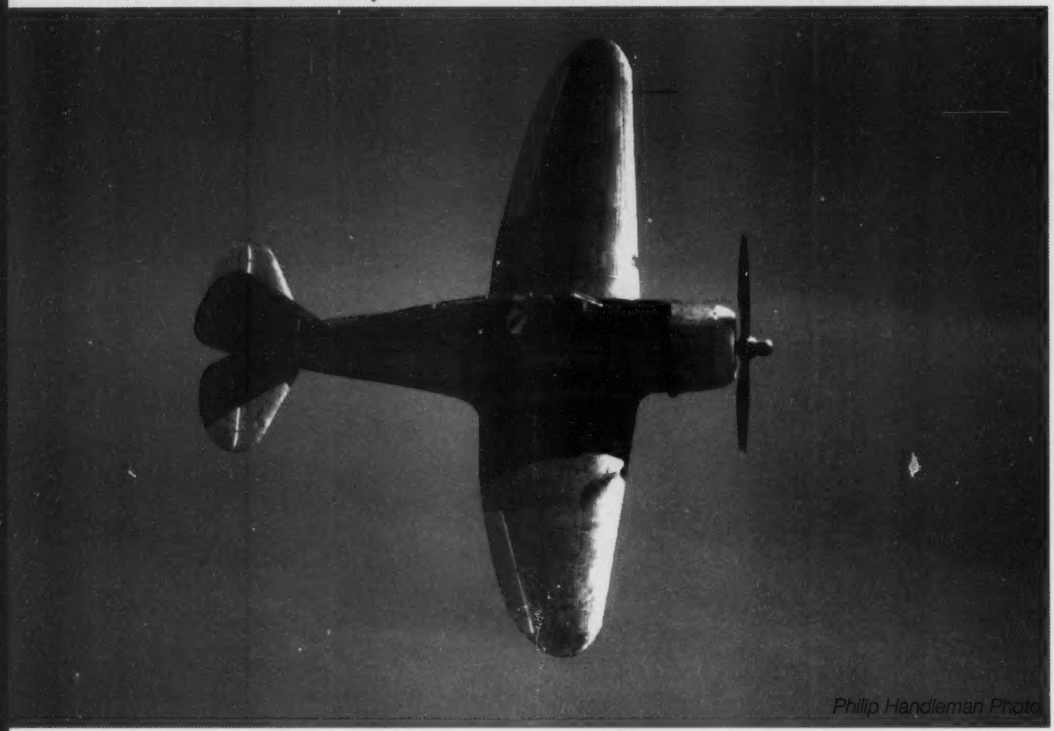
Sometimes the assault on an air show pilot's pride is unintentional. Take the instance of the pilot flying his big Korean War-era attack plane at a Warbird show down south. The pilot did not want to disappoint the air boss who insisted on split-second adherence to the show schedule. A bevy of powerful Warbirds orbited in a crowded pattern, recovering in trail on the runway to make way for the next act. The Warbird pilot in question, trying to expedite his landing, made a hot approach. This was coupled by an apparently deliberate decision to touchdown long so as to accommodate the traffic following fast on his heels. At some point during the rollout, which was straight down the centerline, the pilot should have sensed that the remaining runway was



too short. He should have unhesitatingly added power for a go-around. Instead, the mammoth warplane rambled on, its inertia oblivious to the frantic desire for stoppage. It ran off the end of the runway and came to rest inverted, and the pilot was unfortunately added to the list of air show fatalities.

One has to wonder how that poor pilot, in the fleeting moments he had to decide whether or not to gun his engine for a go-around, weighed the potential for embarrassment. After all, there was a crowd of many tens of thousands in attendance. Would they have hooted deridingly in the wake of a go-around necessitated by a misjudged approach? And what about the anticipated reaction from the air boss and the pilot's fellow performers? At the evening's hangar party would they have gibed the man for electing the prudent option? In air show flying, the priority is one's very being, not one's pride.

Among the more dangerous mistakes a performer can make is playing to the crowd. A performer trying to ascertain or even caring about the reaction of the audience in the midst of a routine is utter absurdity. Once the airplane is aligned with the runway and the throttle is opened for takeoff, there should be no thought given to the crowd other than that it exists. From takeoff to landing, the performer's only thought should be on flying the airplane. Air show flying is so incredibly demanding that all of the pilot's powers of concentration need to be focused on stick and rudder, speed and altitude, space and time. Most people gazing at an air show act are not expert enough to know if the maneuvers were executed accurately. If there is a collective yawn, then a friend or acquaintance of the performer can relate the news subsequent to the routine and the performer can begin to reconstitute the act, carefully and with a lot of rehearsal before going low-level.



Phillip Handleman Photo

It is a good idea for the performer to set sensible rules for him- or herself, and to abide by them unswervingly. For example, one of the military jet teams, ensconced in brand spanking new aircraft, performed flawlessly on the first day of a weekend show. As these crack pilots slept soundly that night, an intruder who had had a little too much to drink somehow evaded security and accessed the ramp where the team's planes were parked. The wayward trespasser smashed his car into a couple of the planes. No one knows why the drunken chap steamed into the row of parked planes, killing himself in the process. In any event, it was determined that one of the two damaged planes was airworthy. Also, the team's spare jet was ready for flight. So, based on equipment availability, the team could perform. Yet, the team had a rule that if some traumatizing disturbance occurs within a given time frame before a scheduled appearance, the team simply will not fly. This is recognition that a pilot's state of mind is at least as important as the condition of his or her equipment. Accordingly, that Sunday the more than one hundred thousand visitors were treated to a gaggle of old-time combat aircraft flown by diehards dedicated to preserving part of aviation history.

Perfunctory meteorological briefings notwithstanding, weather is a factor that air show pilots give scant attention to unless they have a forthcoming cross-country journey. It seems that display pilots, like stage actors, are imbued with that show business philosophy that, no matter what, the show must go on. A huge show in the upper Midwest, always attended by gigantic audiences paying a hefty sum, was about to start the flying display when, as is known to happen in that part of the country on summer afternoons, all of a sudden the sky darkened and a torrential downpour bombarded the airport. Some of the less hearty spectators sought shelter, but most in the crowd braved the showers, standing expectantly in the rain, anxious for the show they had

paid for to begin. The rain subsided a bit, and an established husband/wife wingwalking act took to the low-ceilinged sky. To everyone's amazement, the wife, strapped to a strut atop the Stearman's upper wing, maintained a glistening smile on every pass along the showline despite being pelted by countless droplets.

Before the next act launched, conditions worsened, the precipitation turning into a driving storm, almost a blizzard of rain. The performer next up had flown in a fair number of small shows, and this was to be his break into the big time. Surely, he had never performed his routine in such adverse weather. One can only imagine what it must have been like trying to make out the horizon during a slow roll in the gray murkiness of that miserable day with the avalanche of rain pounding on the alloy underbelly of the little aerobatic plane combining with the turbulent air to play havoc with situational awareness. The weather was an invitation to disorientation, and, as might have been expected, the plane stalled out of the roll and mushed into the softened sod adjoining the runway. The pilot walked away from the wreck, probably wondering what glory he would be enjoying had only the sky been blue.

Distractions, even minor ones, can be injurious to the air show pilot. Conjure up a scenario where a plump bee pops out of an opened air vent, menacingly buzzing around the cockpit, at the moment the pilot is at the top of a vertical climb and about to input cross controls for a hammerhead turn. The temptation to flail at the annoying insect must be repressed. The only viable alternative is to ignore the bee, risk incurring the pain of a sting, and get back on the ground pronto where finally parked on the tarmac, you can exact retribution with a folded aeronautical chart.

Formation flying calls for an extra measure of the participants' attention because not only are the planes being driven in proximity to the ground but they hug each other. Wingtip clearances may be as sparse as three feet. In such cases, there is no margin for even that proverbial hiccup. When things go awry in formation, midair collisions can happen. Nothing is as gruesome as heavy iron tangling with heavy iron. Air show performers flying in teams need to remember to keep their eyes outside the cockpit, constantly monitoring relative position, making minute adjustments as necessary. Concentration, concentration, concentration.

Noted airshow performer Sean Tucker acknowledges the crowd's applause. Philip Handleman photo.

An air show rule that ought to be cast in stone is never deviate from your practiced routine. In the middle of a show, an exceedingly nice performer who had just concluded his fine act with a trademark inverted flat spin, got a call on radio from the air boss advising that the next act was delayed. Could you give the folks another five minutes of air show flying to fill the hiatus, the air boss inquired. Well, being the helpful fellow he was, an affirmative reply was heard on show frequency. Next thing the audience saw was the biplane, perilously low and slow, enter a roll. Seconds later the aircraft hurtled into the ground. If the pilot had just stuck to the routine he knew like the back of his hand he would probably be with us today, entertaining crowds and impressing aviators with his aerobatic prowess.

Knowing your equipment is paramount. The new-found affluence of the current generation has empowered squadrons full of middle-aged would-be fighter jocks to acquire some mean machines.

While there is no law precluding an owner from terrorizing the open sky on the weekends in a monstrously powerful *Mustang* or *Corsair*, common sense dictates that the owner obtain more than the standard insurance check ride and that the dual be administered by someone with considerable time in high performance combat types. A recurring fault among these "weekend warriors" is the gleeful dive during which speed builds up dramatically so that by the time of pullout the flight controls are heavily loaded. By not recognizing this situation and by continuing to pull, the pilot may induce a high speed stall. By unloading first, the dive can be extricated. Naturally, this is not feasible low to the ground, and some freshly minted Warbird owners did not learn the lesson until it was too late. Again, it is all about knowing your equipment.

With aircraft aging taking on ever greater importance, it is becoming more and more critical for air show pilots who fly vintage airplanes to ensure their and others' safety thorough inspections and scrupulous maintenance. In a manner of speaking, the air show performance begins in the maintenance hangar long before the flying. The last contingency that an air show performer should have to contend with during a routine is a mechanical malfunction. Good preventive care of the equipment is an essential for the air show performer. A few hundred feet off the deck with thousands of people looking on is hardly the place or the time for voluntary improvisation. When the unexpected occurs, say, a mechanical malfunction, one must think and re-

act quickly. The cardinal rule, in the parlance of old-time performers, is always leave an out.

One great performer, noted for starting his routine by executing a snap roll right after takeoff, would shortly afterwards come swooping back down over the runway and throw his beautiful and rare, red and white biplane into a perfectly symmetrical slow roll with precious little ground clearance. This performer had an inverted fuel and oil system installed in his antique, but one day, being human, he forgot to switch on the auxiliary avgas tank. In the slow roll his engine quit, an ominous development given the weight and drag of the biplane. But in his years of flying, he had calibrated the maneuver so that if this calamity should ever befall him there would be just enough room to spare. He was able to complete the roll, albeit with a margin of inches, and finish his routine to the cheers and applause of an admiring audience.

Bob Hoover is another of those time tested performers who knows the necessity of leaving an out. Every time this magnificent flyer executes his fantastic energy management series, guiding his *Shrike* back and forth along the show line with only one engine running, he will break at a certain point, heading off on a predetermined tangent so that if the good engine fails, he can glide to the runway.

Some long accepted practices of air shows may need some reconsideration. Air shows invariably take place in the late afternoon when crowds tend to peak. Yet, the air is generally calmest in the early morning and in the few hours before dusk. Perhaps air show scheduling should reflect this meteorological fact. The crowds might be smaller, but those in attendance would be real enthusiasts and the pilots would not have to work so hard.

So often it seems that an airport with intersecting runways, by some kind of preordaining, closes one of those runways to facilitate either the crowd or parking during an air show. What this frequently means is that the performers are confined to a lone runway that is plagued with a strong crosswind. The air show pilots, thus, face another stress factor, having to bring all their skills to the fore just to prevent a groundloop on landing.

In the final analysis, success in air show flying as with flying generally boils down to the pilot knowing the limitations of self and the airplane. The goal of air show flying is not to set records but to entertain, and, as a performer, the air show pilot should be having the most fun. Indeed, the best performers appear to be the happiest performers. When Bill Barber in his distinctively decorated *Stearman* taxied back from a marvelous routine one day late in his life, if you were close enough, you could see that a grin stretched from ear to ear. He was that imaginary kid in a candy store, a charmed soul who had been to heaven and back.

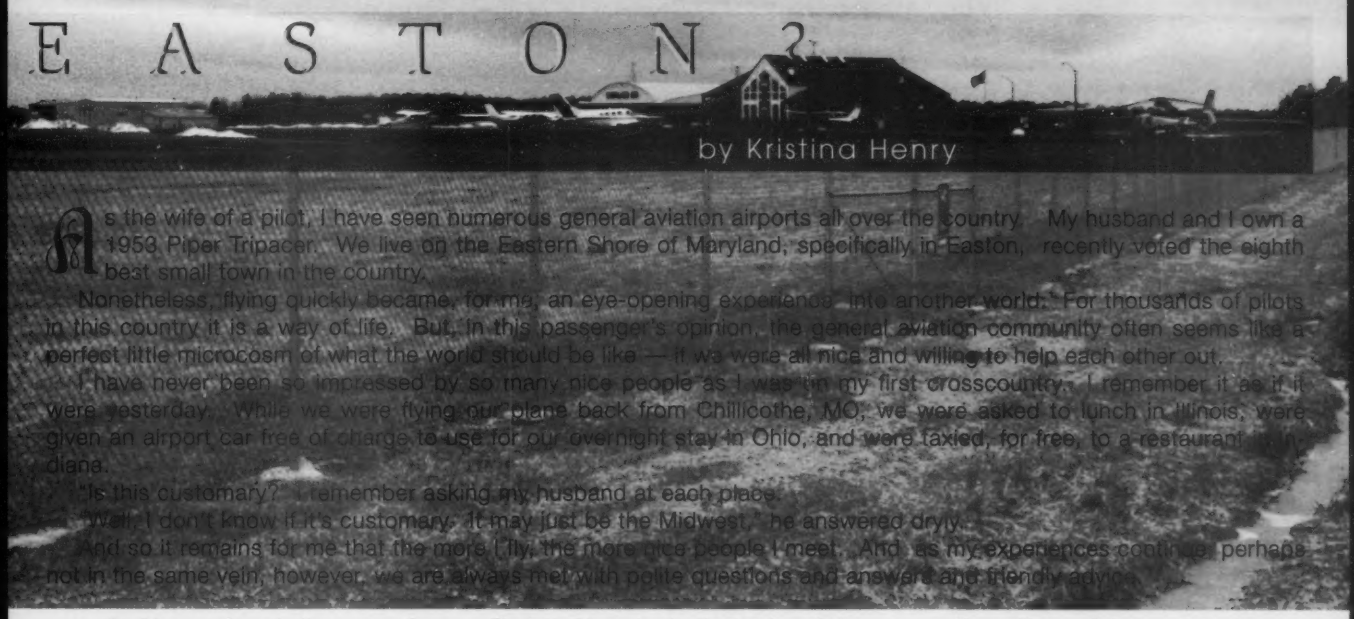
The fabulous Art Scholl, too, loved what he was doing. On a warm summer day, he made that special *Chipmunk* of his twist and turn with the finesse of a ballet dancer. And at the end of the show, with the sky returned to commercial traffic, the performer, with his lovely pet dog Aileron perched on his shoulder, approached the roped off crowd and stayed with his admirers until all autograph seekers were satisfied. As he signed the program booklets being passed his way, the fans heaped praise on the master showman. Hardly raising his eyes as he repeatedly scribbled his name, old Art acknowledged the compliments with a polite and modest nod.

Air show pilots leave indelible impressions based both on how they fly and how they interact with the audience. By being in love with what you do, blue skies and tailwinds will be yours.

Philip Handleman is a licensed pilot, a recognized aviation historian with nine aviation books and dozens of article, a photographer, and president of Handleman Filmworks in Birmingham, MI. He also owns and flies two restored aircraft of military lineage, including a Stearman *biplane.*

Just for interest, please note that the delightful pup, Aileron Scholl, recently went to join her master in the everlasting air show.

"Where in the Heck Is ... EASTON?"



by Kristina Henry

As the wife of a pilot, I have seen numerous general aviation airports all over the country. My husband and I own a 1958 Piper Tripacer. We live on the Eastern Shore of Maryland, specifically in Easton, recently voted the eighth best small town in the country.

Nonetheless, flying quickly became, for me, an eye-opening experience into another world. For thousands of pilots in this country it is a way of life. But, in this passenger's opinion, the general aviation community often seems like a perfect little microcosm of what the world should be like — if we were all nice and willing to help each other out.

I have never been so impressed by so many nice people as I was on my first crosscountry. I remember it as if it were yesterday. While we were flying our plane back from Chillicothe, MO, we were asked to lunch in Illinois, were given an airport car free of charge to use for our overnight stay in Ohio, and were taxied, for free, to a restaurant in Indiana.

"Is this customary?" I remember asking my husband at each place.

"Well, I don't know if it's customary. It may just be the Midwest," he answered dryly.

And so it remains for me that the more I fly, the more nice people I meet. And as my experiences continue, perhaps not in the same vein, however, we are always met with polite questions and answers and friendly advice.

And in no place is it greater than in our own backyard. The Eastern Shore of Maryland, only 70 miles from Washington, D.C., is another world altogether. So close to our nation's capital, the Eastern Shore is like a place caught in time. And so, by design, its inhabitants like it that way.

People help each other out, everyone knows everyone else, and whether you're a descendent of a long line of watermen or the heir to a Forbes 400 company, if you live here you are a native of the Eastern Shore. And so by no means of coincidence it is the same at Easton Airport, where we have our four-seater hangared. Just two buildings away sits a Falcon 50 in its own hangar recently built by the owner of a world-renowned inn situated in St. Michaels, Maryland. Some home-builts fly in and out as well as larger jets and aerobatic aircraft.

The person who oversees all of this is Joe Marsh, the manager of Easton Airport. In the wake of the large airport renovations, rapid technological changes, and huge metropolitan growth spurts, it's a cheerful awakening to find the friendliness reminiscent of past years alive and well in our general aviation community.

We first met Joe when we brought our *Tripacer* back from our trip to Chillicothe.

Joe is an imposing man who is always happy to speak with his tenants and quick to help out; a pleasant relief in a world full of increasing change. It may help that Easton Airport has one of the best little restaurants in the area. Quite often we will find Joe grabbing a quick bite to eat there, and he is always eager to talk flying.

Whether chasing an elderly couple, who mistakenly have gotten on one of the runways in search of an antique store located about a half a mile north, only to return them to the safety of the road that runs parallel to the airport, or, at a moment's notice, giving a tour to a group of Russian pilots visiting their first United States general aviation airport, Joe is always ready to help anyone visiting his airport.

I recently had the opportunity to meet with Joe, and I accompanied him on his runway inspection. Along the way we picked up a broom left on the side of the runway by the snow removal crew. Apparently just after the blizzard of 1996, a plane weathervaned and landed sideways because of a crosswind and ended up in a snow bank.

"What did you do?" I asked.

"We dug him out . . . . he just bent a gear door," Joe answered.

And that began our talk. I went on to ask him what a typical day is for him.

"There isn't a typical day in general aviation," he laughed.

Finally I asked him if he always wanted to be an airport manager. Joe flew for 22 years in the Air Force, the last four years of which

THE PAPER AND INK USED IN THE ORIGINAL PUBLICATION MAY AFFECT THE QUALITY OF THE MICROFORM EDITION.

Joe worked as the manager of airport operations at Whiteman Air Force Base in Knob Noster, Missouri.

Retired from the Air Force, Joe went into real estate for six months and decided he missed aviation. He accepted the position of manager at the Sedalia airport. Six years later, a friend saw an ad in *Trade-a-Plane* for an airport manager in Easton.

"Where in the heck is Easton?" he wondered, but applied anyway. A year later Joe received a call. Surprised at the call and resolved at this point in his life to stay in Missouri, Joe thought, if anything, he and his wife would get a trip East. His wife, Virginia, was originally from Milford, DE, and, although Joe was originally from South Dakota, most of his family now live in the Arlington, VA/Washington, D.C. area. Joe went to the interview. Since they'd always wanted to live on the Delmarva Peninsula, he should have known better. It wasn't a difficult decision for Joe and Virginia to make once he was offered the job.

The two questions posed to Joe at his interview in 1990, and probably every other general aviation airport manager, were first, "Can you make the airport self-sufficient?" and second, "When?"

Joe predicted that he could accomplish these two things by the summer of 1995.

Well, he did it by the summer of 1994. Joe himself says that it was a multitude of things coming together to make the airport self-sufficient.

"It's really hard to get all your ducks in a row if you only have one duck," he said.

"Especially if that duck keeps falling down," he continued.

But it seems that duck has found its flock here in Easton.

Joe admitted that flying has become "horribly expensive" for people today, especially for younger people. And statistics prove that the largest percentage of general aviation operations goes to corporate and business flying. Individuals who fly for personal enjoyment share a much smaller percentage. Those statistics may change in the future and thanks to people like Joe Marsh, things are looking up for small general aviation airports and general aviation as a whole.

With Joe's help and perseverance Easton Airport is not only self-sufficient but also provides an economic benefit to the town and county estimated to exceed $10 million per year.

Joe briefed the County Council in 1990.

"The [Talbot] County Council took an awful lot of criticism from Talbot County citizens [initially] over the cost of the airport; however, they stood behind me when I needed them. And now it's paying off," Joe said.

"People have this perception that the airport is for the rich man's toy."

But, he said, it benefits the entire community. Not only do almost all area big businesses use the airport and its FBO's for commuting purposes, but most airport construction work is done by local contractors. The airport tenants also pay both town and county taxes.

What is so unique about Easton is that for a town of about 10,000 people, the airport does a lot of business. With 90 T-hangars, four FBO's, 10 aviation-associated businesses, and 111 employees, Easton Airport's customer base lends itself to much of the Delmarva Peninsula. Out of the 130 aircraft based there, 14 are jet-powered. The size of airport operations has doubled in five years since Joe Marsh arrived. Over 80,000 operations are conducted annually; broken down that is about 250 operations a day. And over 200 businesses are served. Fuel sales are also a source of income for the airport, and they too have doubled in the past five years. Grants were $1.2 million last year. This year they are already at $.5 million. The bottom line for any general aviation airport is to be self-sufficient. Not only is Easton Airport self-sufficient, but it also generates money for the community.

Another bright spot for both Easton Airport and for general aviation as a whole is "Opportunity Skyway," a flying program for local youths. Started just five years ago, the program was initially designed to offer "at risk" area youths the opportunity to experience general aviation first hand. Since then it has encompassed other students as well. Originally held in places such as Georgetown, DE, and Salisbury, MD, the program consisted of briefings and a few aircraft. Last year it was held in Easton and met with great success. So much so, that it will be held in Easton again this year. Over half a dozen other states have expressed an interest in conducting similar programs.

At Joe's recommendation, the program has been redesigned somewhat to include more aircraft and to consist of a different itinerary. Last year, Joe included military and corporate aircraft and divided the 180 or more youths (ages 13 through 16) into groups. The adolescents were kept busy and the presentations, although shorter in length, were many.

Joe believes that "for us to get through to the adults we have to get through to the kids."

This year, Joe is conducting a companion program to run during the school year to keep interest raised in aviation. The program is an aviation history of Talbot County, which Joe says is very interesting.

There is however, one last link needed in the chain for Joe's vision to be complete, and that is an ILS.

"When we get an ILS we're going to explode!" he said enthusiastically.

Well, Joe, what has happened so far ain't too shabby!

Ms. Henry is a senior technical writer for a Flight Standards' project at FAA Washington Headquarters. She has written several articles about her experiences flying.

FAA Administrator David R. Hinson

U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

April 24, 1996

LETTER TO FLIGHT INSTRUCTORS

If any one group of airmen is critical to the safety of aviation, it is those pilots who have met the skill requirements and become certificated flight instructors (CFI). As CFI's you are not only responsible for training the "next generation" of pilots; you are also a role model when you demonstrate good judgement, safe operating practices, and good piloting habits.

One key concept which you must demonstrate to all your students is set forth in Title 14 of the Code of Federal Regulations, Section 91.3, Responsibility and authority of the pilot in command. That regulation states, in part, that the pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft. It is one regulation that leaves little to interpretation; it means everything you do as pilot in command affects the safe conduct of the flight—your preparation, your judgements, your decision making affects not only your life but that of your student, your passengers, and, in many cases, the public. It is a responsibility and authority not to be taken lightly.

Another rule that is crucial to your decision-making is Section 91.13 which prohibits the operation of an aircraft in a careless or reckless manner. Inadequate decision-making on your part may lead to a violation of this rule.

There are nearly 80,000 of you certificated as flight instructors here in the United States, and the vast majority of you live up to your responsibilities admirably. You instill a primary sense of "safety first" in your students, encourage them to operate in compliance with the regulations, advocate the enhancement of their skills through continuous recurrent training, and foster their interest in aviation by your example.

The FAA is considering whether there should be limitations on the performance of piloting functions by non-certificated persons. In the meantime, you must consider the important role you play whenever approached by a potential student with an unusual training request. That request may be

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from an eager parent who want his or her child to experience the exhilaration we have all known from flying. Sometimes in these cases, parents do not exercise good judgement. It is your responsibility, then, to draw a line between common sense and poor judgement.

When confronted with a well-meaning parent and an eager child, it may be difficult to say no to a proposed record-breaking flight, and, regrettably, you may get caught up in the attention this type of operation generates.

You know how to make the decision to take the controls from a student pilot so that the safety of the flight is not compromised. But a more subtle and difficult responsibility for you is to withstand the pressure exerted by parents, the media, or the child to initiate or complete something that you know is questionable. You must not let your enthusiasm for teaching people to fly cloud your judgement.

The decision to allow a non-pilot passenger to manipulate the controls of an aircraft can be difficult for any pilot or flight instructor, especially if you are eager to introduce a child, grandchild, or next door neighbor to the aspects of flying we all find so exciting. As a responsible CFI and role model, you must ask yourself one simple question: "Is it appropriate for this person to manipulate the controls of an aircraft for which I am responsible?" If there is any hesitation in deciding on your reply, the answer must be "No." Letting a child "take over" at altitude while in straight and level cruise is very different from allowing any inexperienced, non-certificated person to use the controls during a critical phase of flight. You must use your professional judgement to conclude that the aircraft will not be operated in a careless or reckless manner. The burden of responsibility is yours, but it always has been.

The aviation community places its trust in you, the professional flight instructor. You are doing a good job of training America's future pilots.

Sincerely,

David R. Hinson
Administrator

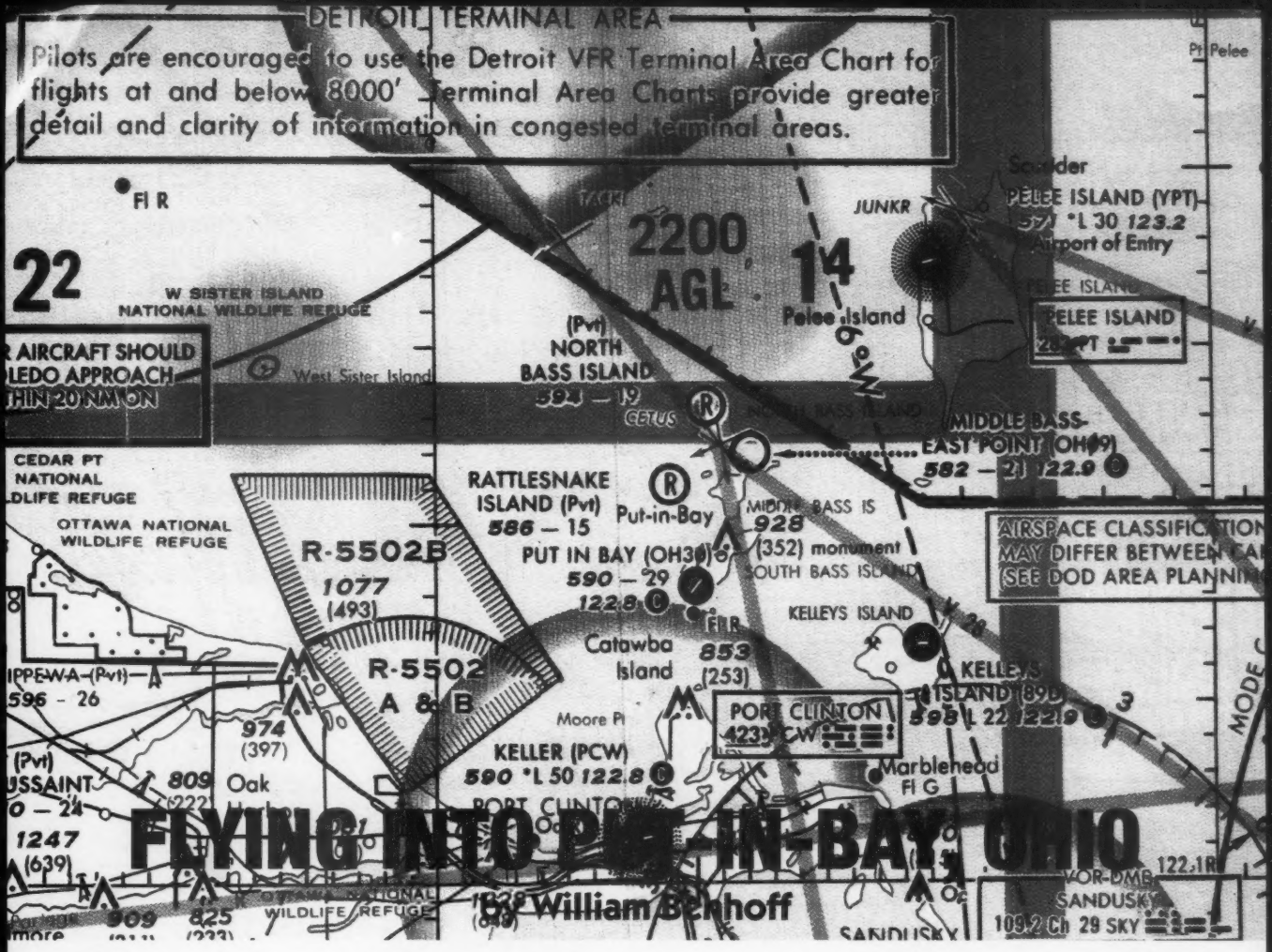
The preceding letter was mailed to all 80,000 certificated flight instructors in the United States as a result of an accident April 11, 1996 in Cheyenne, WY which took the life of seven-year-old Jessica Dubroff, her father, and her flight instructor during an attempt to "break" a non-existant record—the youngest person to fly across the country.

We have reproduced it here because we felt that its message is important to all pilots interested in enhancing the safety image of general aviation with the non-flying public.

Please remove this special insert and post it at your local airport, or feel free to copy it and distribute it as you like.

Thank you for doing your part for aviation safety.

The Aviation News Staff



Now that Summer is finally here, everyone's thoughts are turning to having fun and vacations. One of the most popular spots in Northern Ohio is South Bass Island or Put-In-Bay. No doubt there are many things to see and do on the islands. You can fish, swim, visit one of the many wineries, or just see the sights. One of the most popular sights to see is Perry's Victory Memorial; however, recently, too many have seen it from aircraft flown too close to the monument.

Since 1988 National Park Service employees at Put-In-Bay have recorded an average of 75 to 80 flight operations conducted too close to the monument. Worse yet, there have been reports of aircraft nearly hitting the monument. Should that ever happen, it will mean an end to everyone's good time: The magnificent monument could be seriously damaged, and, worse, flights any where near it could be prohibited. This problem has gained attention from the very top levels of the FAA management, and a call to action has been issued to educate pilots about the problem and its solutions. Hopefully, this action will be enough, but if not....Need I say more?

FAR § 91.119(c) states that (except when necessary for takeoff and landing) aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure. This does include monuments, such as the one on South Bass Island.

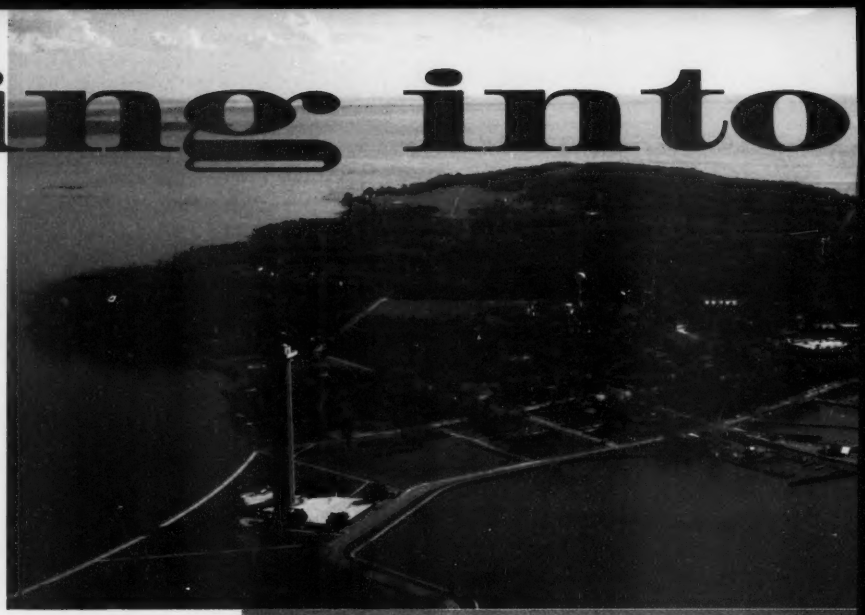
A review of the Detroit Sectional chart above reveals Put-In-Bay (OH30) is an airport with a 2,900' runway that sits at 590' MSL. The monument is reported as an obstruction that is 352' AGL tall or 928' MSL. *The Airport/Facility Directory*'s entry for Put-In-Bay airport advises aircraft landing on runway 22 or departing runway 04 to stay 500' clear of Perry's Monument which is located 1_ miles northeast of the airport.

One would assume that these items would be sufficient to warn pilots of the location of the monument. As you can see, for some it is not.

It is common knowledge that many pilots like to line up with runway 22 over the northeast portion of the island and fly a long final into the airport, providing pilot and passengers a quick sightseeing of the monument. If you look at this situation from the airport on Put-In-Bay, you can see that the monument is in a direct line from the center of the runway. A long final approach causes the airplane to be operated within 500' of the monument.

Some pilots have rationalized this non-compliance with the FAR by quot-

Flying into



ing the portion of FAR § 91.119 that says, "except when necessary for takeoff and landing." Let's analyze this. If it is "necessary" to execute more than a 1_-mile final for a 2,900' runway, you are flying the wrong aircraft into this airport! Eight-tenths of a mile from the end of runway 22 is a point of land before the island that narrows to where the monument is. If you fly your base leg over this point, you will have plenty of final approach to land any aircraft on this runway.

The next possibly hazardous situation occurs on takeoff from runway 04. If you execute a straight-out departure, again, you will fly within 500' of the monument unless your aircraft can climb 900' in 1_ miles in the hot and humid days of summer.

We suggest you execute a standard departure of 45 degrees off the lefthand crosswind and fly over Gibraltar Island or Peach Point. If you are not sure of the location of these geographic locations, ask the folks at Put-In-Bay Airport; they will be happy to point them out to you and assist you in planning your departure.

If you want to take some pictures of the monument, please treat the area where the island narrows and the monument's lawn as a "no-flight" zone below 1,500' MSL. The employees at the monument are concerned for the safety of their visitors on the ground and the pilots and their passengers on board visiting aircraft. Remember, just exactly how many people constitute a congested area has never been established, and inspectors, FAA lawyers, and NTSB administrative law judges have been very conservative in their interpretations of what constitutes a congested area.

Park Service employees have been trained in the procedures for spotting and identifying low-flying aircraft, and they will provide FAA that information, and FAA has taken and will continue to take appropriate action.

Our national parks and monuments are beautiful sights to be enjoyed from the air and from the ground, and by following a few simple procedures and showing courtesy, everyone can enjoy them. Safety Program Managers at your local FSDO's now have a new video called "Friendly Flight Paths," which addresses the issue of how aircraft, national parks, and park visitors on the ground can all operate and enjoy the sights together. Contact your Safety Program Manager for a scheduled showing of this video.

If all pilots operating into the Put-In-Bay airport would adhere to the simple procedures stated above, more stringent measures will not be required, and the pilots' good time at the island will not be ruined by an accident that could have been avoided—or by a request to contact the FAA.

Fly safely, take in the magnificent sight of Perry's Memorial, and enjoy the island and all the good times it has to offer.

Mr. Benhoff is the Safety Program Manager for the FAA Cleveland, OH Flight Standards District Office. For further information, contact him at (216) 265-1374.

Put-In-Bay

←1 Many pilots incorrectly fly a long final for runway 22 at Put-In-Bay from over the northeast portion of the island, putting them too close to the monument. You should fly a left base over the point of land on the left side of this picture, which will provide you with an almost one-mile final approach.

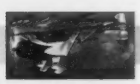
←4 What visitors on the monument's observation deck see. Plan to climb out on departure from runway 04 over the water tower seen on the right.

Treat the whole area you see here as a "no-fly" ←5 zone below 1,500' MSL. During the busy tourist season, at least 2,000' should be your "minimums."

When you make a pro-per departure from runway 04, this is the view of the monument you should see out of your right window. During the peak season—June through August—this area will contain over 10,000 visitors ↓6 each day, thus meeting any definition of a congested area of a city, town, or settlement.

↑2 On downwind for runway 22—the runway is 2,870' long by 25' wide with a slight "dog-leg" and a 185' displaced threshold. You can expect moderate turbulence when the wind exceeds 10 knots. This is not an airport to practice landings, and make sure you have good short field procedures.

When you depart runway 04, the monument is on a direct line with ←3 the runway centerline. You must make a 45-degree departure off the left crosswind very soon after takeoff.



IN THE WINNER'S CIRCLE

by Phyllis Anne Duncan

With a brother whose shelves hold numerous drag racing trophies, this article allows me to write about two family interests—aviation and car racing. What, you say, does car racing have to do with aviation? A number of things.

First, many of the country's top drivers either own and fly their own airplanes or helicopters or rely on their own corporate flight departments for transportation throughout the year's racing schedule. National Association of Stock Car Auto Racers (NASCAR) and the National Hot Rod Association (NHRA) members, then, have long had a strong aviation connection.

Second, many aviation maintenance technicians (AMT) are "dually qualified." Either formally or informally they combine their love of making things work in airplanes with the pride in tuning a high performance racing automobile to its peak. Some drivers' pit crews contain AMT's who also maintain the company aircraft.

Third, Phil Randall, a principal maintenance inspector in the FAA's Winston-Salem, NC Flight Standards District Office—as well as the FAA Southern Regional Safety Program Manager for Airworthiness—initiated a unique idea to generate interest in his district for the Aviation Maintenance Technician Awards. (The AMT Awards are the airworthiness version of the FAA Aviation Safety Program's Pilot Proficiency Award Program; see the side bar on page 19)

Randall came up with the idea of a contest with an interesting prize, one that gets the heart pumping of anyone who revels in the sound of engines.

Beginning October 1 of last year, any AMT who resides in North Carolina, who qualifies for and submits an application for an AMT award, and who submits an aviation safety recommendation could be chosen to be an honorary pit crew member on the Jack Roush Racing Team. The winner would be "in the pit" during the October Winston Cup Race at the North Carolina Motor Speedway near Rockingham, NC.

Roush Racing is a subsidiary of Livonia, MI, based Roush Industries of which Jack Roush is the CEO. With a B.A. in Mathematics, it is not surprising that Roush is interested in automotive racing as he heads an engineering and prototype development company servicing the automotive and transportation industries. Since 1984 his team has racked up 132 NASCAR Winston Cup, NASCAR Busch Grand National, SCCA Trans-Am, and IMSA GTO/GTS wins. He is also the only team owner to finish in the top six in Winston Cup points each of the past seven years.

For now, the contest is being "beta-tested" in North Carolina only, although Randall has received calls from as far away as Seattle. One mechanic hoping to be hired by a major airline wanted the prospective employer to base him in North Carolina so he would be eligible! If response is significant, the program could go region-wide or even nation-wide in 1997.

The contest ends on September 30 this year, and the winner will be selected by the Winston-Salem and the Charlotte Airworthiness Safety Program Managers on October 8, 1996 so the winner can make the October race at the famous speedway known colloquially as The Rock.

North Carolina AMT's who haven't seen the distinctive poster pictured below should contact Phil Randall at (910) 631-5191 for information on the contest and the AMT Award Program.

Here's hoping we'll see the contest winner in the Winner's Circle at The Rock!

And if anyone is interested, The Rock is also where the Editor's younger brother's, Edward E. "Speedy" Duncan, car, "Still Doin' Time," won top honors among 800 drag racers in the 1994 Appreciation Race.

Aviation Maintenance Technician Awards Program

The awards program is actually two separate programs—one for technicians and one for employers. The technician's award is in the form of an FAA "Certificate of Training" and a tie tack/lapel pin for each phase successfully completed, similar in spirit to the Aviation Safety Program's Pilot Proficiency (better known as "Wings") Award. The employer's award is in the form of an FAA "Certificate of Excellence" and is based on the percentage of maintenance technicians who have received any one of the five FAA Certificates of Training in the past calendar year. Both the technician and the employer awards are divided into Phases I-V.

The program is designed so that each additional phase (award) is more demanding than the preceding one. In order to be eligible for an award the requirements for the particular phase must be completed within a calendar year.

Eligibility Requirements for Technician and Employers

The following individuals are eligible for the technician award:

1. An FAA-certificated mechanic or repairman.
2. A student in a FAR Part 147 school who is maintaining a course average of C or better.
3. FAR Part 147 school instructors.
4. Avionics, propeller, and instrument technicians.
5. Any individual who is employed full time by a FAR Part 121, 135, or 145 operator who actively performs maintenance on aircraft or their component parts.

To be eligible for the employer's award the employer must:

1. Be involved full-time in the business of maintaining or repairing aircraft and/or their component parts.
2. Employ at least five full-time technicians.

Phase Requirements and Description for Technicians

A technician may apply for one of the five awards as long as the following requirements are satisfied.

Phase I or Bronze award - the technician must complete at least four hours of FAA or industry training in the prescribed calendar year.

Phase II or Silver award - the technician must attend one FAA or industry maintenance seminar, and satisfactorily complete eight hours of FAA or industry training.

Phase III or Gold award - the technician must attend one FAA or industry maintenance seminar, and satisfactorily complete a three-day FAA or industry training seminar.

Phase IV or Ruby award - the technician must attend one FAA or industry maintenance seminar, and satisfactorily complete a five-day FAA or industry training seminar or taught a three-day (15-hour) maintenance course on aircraft systems.

Phase V or Diamond award - the technician must attend one FAA or industry maintenance seminar, satisfactorily complete a five-day FAA or industry training seminar or taught a three-day (15-hour) maintenance course on aircraft systems, and satisfactorily complete a college-level course in either management or technical subjects.

Phase Requirements for Employers

When a specific percentage of employees in a maintenance organization has received any one of the five phases of awards within the calendar year, that employer becomes eligible for one of the five "Certificates of Excellence." The percentages are as follows:

5% for a Bronze Certificate of Excellence
10% for a Silver Certificate of Excellence
15% for a Gold Certificate of Excellence
20% for a Ruby Certificate of Excellence
25% for a Diamond Certificate of Excellence

Applying for an Award

At any time during the calendar year any eligible technician can apply either in person or by letter to the local FAA Flight Standards District Office (FSDO) for an award. The technician must show that he or she is eligible. First, there must be acceptable proof that the individual is indeed an aviation maintenance technician. This proof may be in the form of either an FAA mechanic or repairman certificate, a statement from a FAR Part 147 school certifying that the student is maintaining at least a C average, a statement from a FAR Part 147 School certifying that the individual is an instructor at that school, or a statement from a FAR Part 121, 135, or 145 operator certifying that the individual is employed by that operator to maintain aircraft or related components.

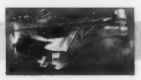
The second required item is a short, signed and dated letter to the local FSDO describing the phase requested, where the training was received, who did the training, what training was received, how long the training was in hours, and the date of the training.

The third required item is some form of proof that the training was received. Copies of a certificate of training, attendance, or graduation are acceptable as long as they corroborate the information supplied in the letter.

At any time during the calendar year an eligible employer can apply by letter to the local FSDO for an award. The employer's letter should state the award requested, that the organization works full-time on aircraft or their component parts, and that the total number of technicians working full-time is at least five. The employer should attach copies of employees' FAA Certificates of Training dated for the applicable calendar year.

Both the technician and employer should allow at least 30 days for the FSDO to process the award request. But this small delay in recognition is short considering the U.S. Government has been certificating mechanics for 66 years.

Contact your local Flight Standards District Office for more information on this program.



BOB HOOVER: THE FACTS by Jon L. Jordan, MD

At some point during the time when the FAA suspended Bob Hoover's medical and FAA reinstated it with limitations, a reader wanted to know if FAA Aviation News *was going to write about the incident. At the time, Mr. Hoover's case was still being adjudicated, and we could not comment. Since the reinstatement of his medical, I put out some "feelers" to see if an in-depth article was in order. It seems all concerned wanted to get the incident behind them, so we can enjoy Mr. Hoover's performances again. However, when I read this article by Dr. Jordan, I felt he said it all. This, of course, may not satisfy some, but I feel Dr. Jordan has communicated his motivation and justification very well.*

I, for one, am looking forward to seeing Bob Hoover when he headlines at Oshkosh '96.--The Editor

Possibly in the entire history of the conduct of the airman medical certification program no one decision has created more controversy than that concerning Mr. Robert A. (Bob) Hoover.

Accusations about the revocation of Mr. Hoover's medical certificate have ranged from allegations of a personal vendetta by agency Flight Standards inspectors to an agency bias against aging pilots. Many articles in various aviation publications have contained inaccurate and misleading information, designed, I believe, to inflame the reader and to stir controversy. The agency has remained silent on these allegations for two principle reasons: First, to assure non-interference with the legal process as the case wended its way through the judicial system and second, to preserve, in so far as possible, Mr. Hoover's rights to privacy. A continued "tight-lipped" policy no longer appears necessary since the judicial process has ended and many of the medical factors related to the disqualification decision are a matter of public record.

My finding that Mr. Hoover did not meet the medical standards and the subsequent revocation of his medical certificate were based on the diagnosis of a significant cognitive deficit and evidence of cerebral pathology. While reports from Flight Standards inspectors regarding sub-par performance at an air show led to the special medical evaluation of Mr. Hoover, it was the medical evidence that resulted in his disqualification. The medical determination was made in consultation with nationally recognized experts in aerospace medicine, neurology, neuro-psychology, and psychiatry.

The pressures to find Mr. Hoover qualified were significant, but with the medical evidence available, it was clear that to do so would place the public—and Mr. Hoover—at an unacceptable risk.

Following the revocation, the matter of Mr. Hoover's eligibility for certification was pursued through the review process provided by the National Transportation Safety Board (NTSB) and in the Federal courts. The agency's action in revoking the certificate, while reversed by the NTSB's Administrative Law Judge, was affirmed in a clearly written and strongly worded decision by the full Board. That decision was subsequently affirmed by the United States Court of Appeals for the District of Columbia. The United States Supreme Court refused to hear a further appeal.

Following conclusion of the legal proceedings, Mr. Hoover requested reconsideration. In view of the length of time since his last evaluations, I agreed to consider the special issuance of a medical certificate, to be based on the results of a new assessment. Repeat studies revealed some unexpected normalizing changes in his clinical condition.

In view of this new information, I concluded that Mr. Hoover could be issued a second-class medical certificate that, although limited and conditioned on comprehensive follow-up evaluations by a physician of our choosing, would allow him to perform in air shows.

The opportunity for reconsideration that was afforded Mr. Hoover is the opportunity that is afforded to any airman who seeks medical certification. A decision once made is not considered ever binding if there is a change in circumstances.

While it is regrettable that Mr. Hoover's disqualification created so much controversy, I continue to firmly believe that the original decision was appropriate, given the clinical evidence. In addition, however, I also believe that the final outcome graphically demonstrates the fairness of the certification system and the protection provided airmen by the process we use in applying our certification standards.

-Dr. Jordan is the FAA's Federal Air Surgeon.

NEW MEDICAL RULES EFFECTIVE

The FAA on March 13 issued a final rule that comprehensively revises and upgrades pilot medical standards and certification procedures.

The rule affecting approximately 654,000 pilots nationwide is an exhaustive rewrite of the medical standards used by the FAA in issuing airman medical certificates. The rule considered and accepted many recommendations from the aviation and medical community.

During the four-month-long comment period in which the FAA held three public hearings, the agency received more than 5,200 responses, an unusually high number, from individuals and industry.

In a move to reduce the regulatory burden on many pilots, the current two-

A Happy Finale

Another Certification Case Study with a Happy Ending

by Paul H. Clark, MD

Roland M. had been a pilot since 1935 when he bought his first airplane and soloed after three hours and 45 minutes of instruction.

Since then, he has owned at least a hundred airplanes. With the outbreak of World War II, he became a captain in the Civil Air Patrol and dedicated himself to teaching thousands of cadets to fly for the Army and Navy. He was a featured pilot at air shows throughout the northeast during the 1940's until 1956 and was headlined in Ripley's Believe it or Not in 1946.

In mid-1993, Roland went to his Aviation Medical Examiner's office to renew his third-class airman medical certificate. His AME issued a medical certificate at the time of this examination, but later the Civil Aeromedical Institute's Aeromedical Certification Division (AMCD) in Oklahoma City asked Roland to provide a cardiovascular evaluation to determine his eligibility for medical certification. This request was the result of medical history reported on his Application for Airman Medical Certificate (FAA Form 8500-8).

Roland responded to the request but had not completed the cardiovascular evaluation by December 1993, requesting that his case be left in a pending status for the winter. In the spring of 1994, he provided the remainder of the requested evaluation. Unfortunately, the maximum exercise stress test report listed a diagnosis of Coronary Artery Disease (CAD).

After repeated requests, the AMCD did not obtain adequate medical documentation from the treating physicians to clarify the CAD diagnosis. With no response from the airman, the AMCD informed him that his medical application was denied and requested that he surrender his medical certificate. Responding to this in frustration, Roland replied that he had taken his medical certificate and "framed it for a souvenir to remember the 60 years of flying" he had enjoyed.

The AMCD sent the airman's file to us, the FAA New England Regional Office, for follow-up action or to retrieve the medical certificate, if indicated by the diagnosis. (All legal action regarding medical certificates takes place in the region in which the airman lives.)

We contacted the airman and stated exactly what information was required from his treating physicians regarding the CAD diagnosis to determine his eligibility for airman medical certification. Shortly thereafter we received clarification from his physician, indicating there was no CAD, but rather, that the stress test had been ordered to rule out the diagnosis of CAD.

Finally, in November 1994, we informed the airman that his "framed" medical certificate was valid until its normal expiration date. In response, he exclaimed, "That's the best Christmas gift I could receive!"

With approximately 650,000 pilots in the United States, the AMCD reviews over 450,000 medical applications yearly. On occasion, as shown in this case, further medical information may be requested to determine eligibility for airman medical certification, and sometimes difficulty may be incurred in obtaining proper documentation.

Airmen should ask their AME or the Regional Flight Surgeon's office when assistance is needed with medical certification issues. Dr. Jon Jordan has emphasized the importance of the AME contacting the Regional Flight Surgeon's office if there are any questions or concerns regarding an airman's eligibility for medical certification and to assist the airman in the certification process.

The AMCD reports that only 0.7% of all airmen are denied certification and that this number is reduced to 0.1% when airmen follow up and provide the requested information.

We are pleased to report that Roland M. was medically qualified again in 1995 and continues to enjoy his 60-year love affair with flying.

Dr. Clark is the New England Regional Flight Surgeon and tells us Roland M. listed having over 18,000 hours of flight time on his 1993 physical, and he is now 81. Drs. Jordan's and Clark's articles originally appeared in the Winter 1995 edition of The Federal Air Surgeon's Medical Bulletin, sent to all aviation medical examiners.

SEPTEMBER 16

year validity period for a third-class airman medical certificate will be revised into a two-tier system. Under age 40, the certificate will be valid for three years. For age 40 and over, the certificate will be valid for two years. Other changes include the following:

• Heart replacement, permanent cardiac pacemaker implantation, and

Continued on Page 24

GPS INSTALLATIONS

Communication is the Key to Successful Field Approvals

by Richard Davis

You've just purchased the latest, state of the art, most accurate, approach-qualified global positioning system (GPS) available! The salesperson sold you on the great savings, the fact that your system is "user friendly," easy to learn," and "will slide right into the space currently used by your LORAN." Wow, what an easy, quick installation, and you're ready to go. Two weeks later you excitedly meet up with the installer only to have your bubble burst as he tells you that the system installation is more complex than you originally thought. First, you find out that the system will have to be "field approved" by the local FAA inspector! By the time you get through all the red tape and jump through all the hoops, it's going to be three weeks before you'll get to fly your aircraft again! To make matter worse, the salesperson didn't tell you that your aircraft installation required four additional annunciators and some instrument panel modifications to be IFR and approach-qualified. If only they had communicated more clearly! What does it take to get a GPS installed? What are the steps? Who are the players? How long will it take?

Guidance

FAA Advisory Circular (AC) 20-138, "Airworthiness Approval of Global Positioning System (GPS) Navigation Equipment for Use as a VFR and IFR Supplemental Navigation System," details an acceptable means of gaining approval of a GPS system designed to be used for navigation. It does not address GPS system used for agricultural and surveying applications. This 34-page document can be very intimidating even to the seasoned avionics technician. It's designed to cover both "original" and "follow-on" installations. Original installations concern the first time a particular unit is approved for use in any aircraft usually through a supplemental type certificate (STC) or Type Certificate (TC) process. A "follow-on" is an approval accomplished by comparing a new installation with one that was previously approved, usually via an STC. This comparison is to determine that the installations are similar enough to allow field approval of the new installation and not so complex to require a new STC. Most GPS installations will be a "follow-on" approval. It is a good idea for both the installer and owner to review this document to better understand the process. The easiest way to digest AC 20-138 will be review the sidebar on page 25 for the basic procedure in getting your VFR or IFR GPS system approved.

Process

Theoretically, there are five basic steps to having a GPS in your aircraft:

1. The aircraft owner first purchases a GPS system and arranges for its installation. Technically, approval should be in hand before installation is begun.
2. The person installing the GPS gathers and submits data to the local FAA office for approval.
3. The FAA inspector reviews the data, requests necessary changes, then ultimately approves it and returns it to the installer.
4. With approval in hand, the installer accomplishes the installation.

5. Finally, the functional flight evaluation is accomplished by a qualified pilot. (See the October 1995 issue of *FAA Aviation News* for an article on the functional flight evaluation.)

These steps, although simplistic, accurately depict the basic process for obtaining approval. Unfortunately, reality often dictates a different order, a few more steps, and other surprises along the way. Let's review some of these items in more detail.

At the time of purchase, it is recommended that the aircraft owner understand what it takes to get a GPS legally installed. It should also be clear what the intended purpose of the GPS will be. Installation requirements and out-of pocket expenses are considerably different for VFR, IFR enroute, approach, oceanic, and primary navigation applications. The capability of the unit you choose will normally be limited to the capability authorized in the original follow-on approval. Choice of a particular unit should be based on the availability of previous installation approvals, technical standard order (TSO) status, manufacturer's support for installation, and future upgrades, along with service, training, and usability. Furthermore, know your installer; one of the reasons you may not have been informed of the extras required for your installation may be because of the learning curve of the person doing the work.

The "data" is the information package used to accomplish the installation, usually in the form of manuals, drawings, specifications, and photographs. This package includes all the necessary information to describe the installation in adequate detail. Application for approval is made to the FAA on FAA Form 337, where the information included in the data package is listed and summarized. This is where it is important that the FAA inspector communicate what information will be required to be referenced and what information he or she will want to have for the office file. The most important data the inspector will need to review is that data referenced in the "follow-on" STC. Sometimes this may be difficult because holders of STC's don't like to distribute this "proprietary" information. They will normally send copies of the STC cover sheet and the sample flight manual supplement; yet, without the rest of the drawings listed on the STC, a true follow-on approval cannot be accomplished.

A flight manual supplement (FMS) will also have to be written and submitted for approval for IFR systems and VFR systems, depending upon their complexity. The purpose of the FMS is to detail the specific system installation for the pilot. Normally, it will contain limitations, emergency and abnormal procedures, normal procedures, performance information, and a system description as appropriate. The approved FMS issued as part of the original STC should be used as a guide to write the new FMS. They will be almost identical, only differing where the installation was not the same. It is important that the limitations section remain the same or more restrictive and that the system description reflect the actual installation.

AC 20-138 requires a "functional flight evaluation" to verify proper operation and assure that the installation does not interfere with other aircraft systems. Special attention must be paid to GPS which is especially susceptible to VHF and HF communications interference. Accessibility and visibility of all controls pertaining to GPS must be evaluated as well. Because of the general nature of the AC, it is recommended that a proposed flight evaluation be submitted to detail the specific items that require checking for the benefit of the FAA and the pilot conducting the evaluation. This will save time and flying dollars by removing any doubt regarding what or how items should be checked during the flight.

Installation Considerations

While reviewing the data package submitted by the installer, the inspector will be verifying that all the appropriate airworthiness considerations have been properly addressed. These considerations are found in AC 20-138 and in the airworthiness standards of FAR Parts 23, 25, 27, 29, etc. For example, certain annunciators and navigation indicators will have to be located in the pilot's primary field of view or instrument scan. They will also have to be easily readable during day, night, and glaring sunlight conditions. Corporate jets that allow single pilot operations will sometimes severely limit existing instrument locations and future panel modifications, therefore limiting the real estate available for your GPS. The "GPS Compliance Checklist" (page 25) can be a useful guide to assure that all the appropriate data and airworthiness standards have been addressed on the FAA Form 337 or as an attachment to it.

At Last, Approval

When the inspector is satisfied that all the requirements have been met, he or she will sign the proposed flight manual supplement and approve the data by stamping and signing block 3 of the FAA Form 337. At this point the installer can officially begin the installation.

Many inspectors will also choose to come and look at the installation while it's in progress. This is the inspector's prerogative, and, besides, another set of eyes never hurts.

After the installation is completed, the flight evaluation can be conducted. If problems are noted on the flight evaluation, they should be recorded, repaired, and approved for return to service just like any other maintenance.

In Conclusion...

Communication is the key to successful GPS field approvals. It is important that the FAA inspector adequately discuss with the installer the complete approval process. This is especially true regarding what information needs to be referenced on the FAA Form 337 and the inspector's availability to complete the project in a timely fashion.

The salesperson must also clearly communicate to the customer, explaining up front the full approval process for the particular product.

The installing agency should keep the customer updated and be available throughout the process ready to answer any questions and concerns the

customer might have. This allows the customer to be part of the project rather than an uninformed bystander who constantly interrupts progress with a thousand questions and follow-up phone calls.

The installer must submit, in a timely fashion, all of the data requested by the FAA. An incomplete package will always delay the approval.

Finally, the customer has to recognize that every installation is not the same. Each has its own unique set of problems to overcome.

GPS installations and approvals should not be a painful experience. The FAA, the salesperson, the installer, and the customer clearly understand the process and communicate with one another for a successful, no-hassle installation and approval, that first flight and GPS approach will truly be a rewarding and exciting experience worth every penny!

Mr. Davis is a principal avionics inspector in the Portland, OR Flight Standards District Office.

MEDICAL

NEW MEDICAL RULES EFFECTIVE SEPTEMBER 16

Continued From Page 21

cardiac valve replacement will be disqualifying heart conditions for all classes of airman medical certificate. The FAA will continue, however, to certify through a waiver process those applicants whose conditions are stable, and who individually have been determined to be safe.

• A verified positive drug test result under a US Department of Transportation drug testing program will become a basis for medical disqualification. Previously, an established diagnosis of drug dependence was necessary for medical disqualification.

• Airline transport and commercial pilots over age 50 will now be annually tested using a new intermediate vision standard. This will ensure that these pilots have the ability to view their instrument panels.

• A new near vision standard is being implemented for private pilots. This will ensure that these pilots can perform such flight duties as map reading.

• Hearing tests may now include the use of modern audiometric equipment or conversational voice in lieu of the current whisper voice test, and the standards for ear, nose, mouth, and throat will specifically target pathologies that are hazards during flight.

• The FAA chose not to adopt a new requirement for resting electrocardiograms (ECG) for second-class medical certification. A recent review of current certification practices found that airmen, whose medical history and examinations indicate that ECG or other tests are needed, obtain the testing before receiving certification. It was determined that additional requirements would not result in further strengthening the level of safety in this area.

The full text of the rule was printed in the March 19, 1996, issue of The Federal Register. The rule will take effect on September 16, 1996. All Aviation Medical Examiners will receive a copy in the mail.

ERRATA

In the March 1996 issue, we indicated that there were no survivors of a December 1994 aircraft accident near Raleigh-Durham, NC. There were actually 15 fatalities and five survivors. We regret the error. -- Editor.

AVIATION TRIVIA QUESTION

We've all seen the quasi-fictional representation of Gen. Chuck Yeager's first supersonic flight in the Glamorous Glennis in the popular movie, The Right Stuff. As the story goes, Yeager, who was active duty military at the time, was selected to fly the Bell X-1 after the civilian test pilot requested a large bonus. Then, Yeager broke three ribs falling from a horse the night before the flight was scheduled, but he didn't tell anyone so he could make the flight. The trivia question is:

Who was Yeager's Army Air Corps back-up had he not been able to make the flight?

The answer will appear in the next issue, and the first three correct answers will receive a copy of a new FAA Aviation Safety Program video on Controlled Flight Into Terrain. Fax your replies to (202) 267-9463 or E-Mail them to:

Phyllis_Duncan@mail.hq.faa.gov

Remember to include your name, address, and phone number.

Anyone who has an interesting aviation trivia question he or she would like to see in the magazine can also send them to the same number and E-Mail address above—just remember to include the answer!

GPS COMPLIANCE CHECKLIST

Purpose: This checklist was designed to be an aid to help the installer assure that all the appropriate data and airworthiness standards have been addressed on the FAA Form 337 or attachments. *It is to be used only as a guide and is not all-inclusive nor is each item listed absolutely required.*

- Follow-on STC as basis for installation, i.e.:

"This installation is a follow-on approval based on XXX Company STC SAXXX in a [make and model aircraft]."

Note: Should have STC and drawings referenced therein to conduct a "follow-on."

- R/T model part number; location in center panel closest to pilot; clear of engine and prop controls. Bonded rack.
- Antenna model part number; 24 inches from DME; transponder; TCAS; TCAD; VHF comm. Doubler and sealant recommended by airframe manufacturer and AC 43.13-2A, chapter 3, rigid antenna installations. Mount within 3-5 degree level.
- All switches and annunciators by manufacturer and part number:

  Nav/GPS switch enunciator

  WPT/MSG enunciator

  GPS CRS, OBS/LEG annunciator

  GPS APR, ARM/ACTV switch enunciator
- Note: switches and enunciators should be those recommended in STC or will need clear written data showing equivalency as part of data package. Must meet FAA lighting considerations. All annunciators and switches should in pilot's scan and reachable.
- HSI/CDI interface; part number; must be in pilot's scan.
- Day/Night/Test lighting dim switch and placard. R/T backlighting.
- Autopilot interface; make and model.
- Altitude source
- Cooling; should be forced air 4 cfm minimum (as required)
- Labeling and placarding of all switches
- Appropriate data base
- Electrical power interface, circuit breakers, power bus, load analysis
- Remote mounted data loader plug
- Altitude advisory function; audio system level
- Proposed ground test plan; frequency and EMI tests
- Proposed flight test evaluation consistent with AC 20-138, section 8.C.(2)(iv)A through K, as applicable
- Proposed flight manual supplement (must describe your installation)
- Installation of pilot's operating handbook (list part number) in aircraft.
- AC 20-138 Appendix 1; section 1 for VFR, section 2 for IFR
- Installation manuals by part number
- AC 43.13-2A:
  - Chapter 1
  - Chapter 2, paragraphs 21, 22, 23, 24, and 27
  - Chapter 3, paragraphs 36, 38, and 44
  - Chapters 11 and 13
- AC 43.13-1A Chapter 11, sections 2 through 7
- Provide schematic of installation
- Airframe manufacturer's installation information, especially for structural and pressure vessel alterations.

Airworthiness Standards FAR Parts 23, 25, 27, 29

§ 21.303	Approval of parts		
§ 23.1301	Function and installation	§ 23.1357	Circuit protective devices
§ 23.1309	Equipment systems and installation	§ 23.1365	Electric cables and equipment
§ 23.1311	Electronic display instrument systems	§ 23.1367	Switches
§ 23.1321	Arrangement and visibility	§ 23.1381	Instrument lights
§ 23.1322	Warning, caution, and advisory lights	§ 23.1431	Electronic equipment
§ 23.1325	Static pressure system	§ 23.1541	Placards and markings
§ 23.1329	Automatic pilot systems	§ 23.1555	Control markings

Statement from Administrator Hinson

We have received many calls and e-mail messages concerning the tragic aircraft accident in Cheyenne, WY on April 11 which killed seven-year-old Jessica Dubroff, her flight instructor, and her father. The accident, of course, is still under investigation, and the probable cause of the accident will be determined by the National Transportation Safety Board, probably within a year.

We appreciate everyone's comments and expressions of condolence, and in response we'd like to reiterate some of the pertinent rules and regulations and print a statement released by FAA Administrator David R. Hinson on the day of the accident.

Editor, FAA Aviation News
Washington, DC

To be eligible for student pilot certification a person must be at least 16 years of age for powered aircraft or at least 14 years of age for gliders and free balloons.

To solo an aircraft a person must, among other things, meet the above minimum age and have received specific instruction from a certificated flight instructor authorized to instruct in the category and class of aircraft involved. The flight instructor must also have endorsed the student pilot's certificate and pilot logbook authorizing the solo operation.

To be eligible for a recreational or private pilot's certificate a person must, among other things, be at least 17 years of age for a powered aircraft or 16 years of age for a glider or free balloon; have successfully accomplished the prescribed knowledge test; and have the prescribed aeronautical knowledge and successfully demonstrate the appropriate aeronautical skills in accordance with the applicable practical test standards. As required by FAR § 61.109, the minimum number of hours for a private pilot certificate is 40 (20 dual, 20 solo); however, the average private pilot takes approximately 72 hours to be certificated.

The FAR for the certification of pilots do not preclude a person at less than the minimum age requirement for a student pilot from manipulating the controls of an aircraft when accompanied by either a qualified pilot or a certificated flight instructor, who is in fact the pilot-in-command. Regulations define pilot-in-command as the person who is responsible for the operation and safety of the aircraft and its passengers during flight time. (FAR § 91.3)

Under regulations for certification of pilots, a person who holds at least a private pilot certificate bearing applicable category and class ratings and at least a third class medical and who meets applicable currency requirements may serve as pilot in command of an aircraft carrying passengers under visual meteorological conditions (VMC).

STATEMENT BY FAA ADMINISTRATOR DAVID R. HINSON

Thursday, April 11, 1996

On behalf of the Federal Aviation Administration, I wish to send our sincere condolences to the family and friends of those who died in today's tragic accident in Cheyenne, Wyoming. Our deepest sympathies are with them at this most difficult time.

It is our understanding that the National Transportation Safety Board has dispatched investigators to the scene of the accident. The FAA is providing aviation experts to participate on this team as well. It is inappropriate to speculate on the cause of the accident at this time.

Federal Aviation Regulations stipulate that at all times, the pilot-in-command, in this case the flight instructor, is responsible for the control and safe flight of the aircraft.

I have asked the FAA's Associate Administrator for Regulation and Certification to review the Federal Aviation Regulations pertinent to the manipulation of flight controls by non-pilots.

NOMINATIONS OPEN FOR 1996 AVIATION SAFETY COUNSELOR OF THE YEAR AWARD

Nominations for the 1996 Aviation Safety Counselor of the Year Award are due in FAA Flight Standards District Offices (FSDO) by August 1. This is the second annual award recognizing the efforts of the 4,000+ safety volunteers who make the FAA's Aviation Safety Program a success.

Nominees must be active Aviation Safety Counselors, have not been found in non-compliance with the FAR within the previouis five years or not be presently involved in an enforcement action, and not have been involved in any criminal offenses while exercising the privileges of any airman certificate.

Nominations can be made on FAA Form 8740-14, "Nomination Form—Aviation Safety Counselor of the Year Award Competition." This form is available from the Safety Program Manager at your local FSDO. A counselor can nominate him- or herself.

Each FSDO forms a panel consisting of other counselors, the SPM, and individuals from the local aviation industry. The panel selects a local winner. All local winners go to the FAA region having jurisdiction over those FSDO's, where a similar panel selects a regional winner by September 15. The nine regional winners' names then go the the National Aviation Safety Program Branch, where a national winner is selected on November 1. The national winner receives a letter from the FAA Administrator and a specially designed trophy. (See the March 1996 issue of *FAA Aviation News* for a story on the 1995 winner.)

For further information, contact (202) 267-3353 or the SPM at your local FSDO.

Seaplane Seminar Fly-In

The Albany, NY, Flight Standards District Office (FSDO) is once again participating in the 23rd Speculator Seaplane Pilot's Safety Seminar at Camp of the Woods in Speculator, NY. Sponsored in part by the FAA Aviation Safety Program, members of the aviation industry, aviation membership groups, and the Speculator Chamber of Commerce, the three day event features seaplane safety seminars by representatives from Transport Canada, the FAA, NTSB, and various industry experts. Other topics include discussions on GPS and various aspects of seaplane flying. In addition to the various safety seminars and factory demonstrations, there will be piloting contests such as spot landings and water bombings. Meals and an awards presentation are an important part of the fly-in.

FAA Flight Service personnel will be available on Saturday and Sunday for weather briefings and flight plan filing.

The three-day event starts with a breakfast at 7:45 a.m. on Friday, June 14, and ends after 10:00 a.m. on Sunday, June 16.

For area lodging information, reades can contact the Speculator Chamber of Commerce at (518) 548-4521. For reservations, readers can call Camp of the Woods at (518) 548-4311. Readers can also call Mr. Mark Furman, the Albany FSDO Safety Program Manager, at (518) 548-8481, extension 206 for additional information on the safety seminars.

Calendar of Events

It's that time of year again when aviation enthusiasts start gathering at local airports. The following is a list of some of the events planned.

May 24-26 Watsonville Municipal Airport, CA (WVI). West Coast Antique Fly-In. For information call Bud Field (510) 443-2399 or Nancy Auld (415) 726-4825.

June 1-2 Chattanooga, TN - Metropolitan Airport. T.D. Thompson Children's Hospital Airshow '96. This is an official Tennessee 200 Bicentennial Event and will benefit the Erlanger Medical Center. The U.S. Navy Blue Angels will be featured. For information access on the Internet at http://www.voyageronline.net/airshow1 or call Todd Womack (423) 778-2921.

June 22-23 Berkeley Springs WV - Potomac Airpark (W35). EAA Chapter 36's 19th Annual Fly-In/Drive-In. For information call Dean Truax (717) 294-3221.

June 28-30 Hamilton/Fairfield Airport, OH. Fifth Annual Wings Weekend. For information call Martha Lunken, FAA Safety Program Manager, Cincinnati FSDO (513) 533-6104.

1996 Oshkosh EAA Fly-In NOTAM

As of press time, the FAA Special Notice to Airmen (NOTAM) for the 1996 Experimental Aircraft Association (EAA) Fly-in and Convention in Oshkosh, WI, was not yet available. The NOTAM is expected to be released by the first week in May. Readers are reminded to contact their local Flight Service Station for copies of the special NOTAM before departing for Oshkosh. The NOTAM is for the period from July 30 through August 7, 1996.

LEGENDARY GENERAL CHUCK YEAGER ADDRESSES WOMEN IN AVIATION CONFERENCE

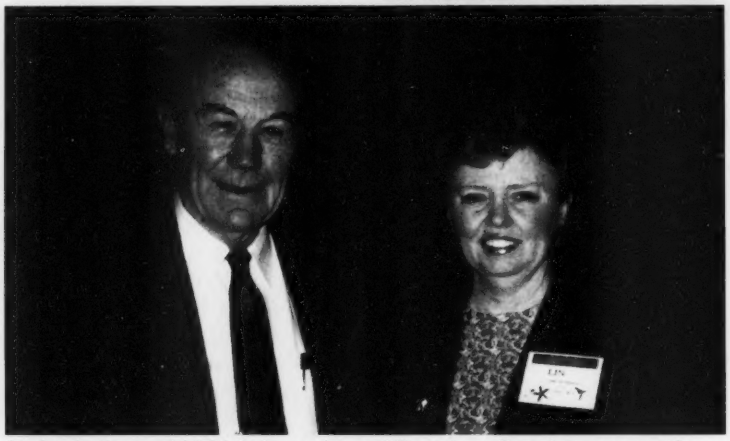
Declaring himself the luckiest man on earth to "have flown with more women pilots than any other living man," retired General Charles "Chuck" Yeager addressed the 1,400 attendees of the seventh annual Women in Aviation Conference in Minneapolis, MN this past March.

Yeager, who still conducts some flight testing, gave an enthralling overview of the history of military test flying and development of military aircraft over the past 50 years—from his historic flight in Glamorous Glennis to current stealth technology.

Yeager highlighted certain strategic advantages over the years that didn't seem so important in their initial development. For example, G-suits, common for every fighter pilot today, were cumbersome affairs in late World War II, but they made the difference for allied pilots because the Germans didn't have them. With G-suits allied pilots were able to have continued consciousness through flight regimes where the German pilots blacked out. Using his hands to demonstrate, Yeager said, "We just slipped behind 'em when we knew they couldn't see us."

Concluding with a pitch for the Experimental Aircraft Association's Young Eagles program, for which Yeager is honorary chair, Yeager told of taking some "youngsters up in a Gooney Bird" and watching their fascination. He closed by challenging everyone in the audience to "take a youngster up and show 'em how to fly!"

Again this year, the Women in Aviation Conference broke the previous attendance record, with 1,400 attendees from all 50 states and seven foreign countries. Some 200 students from college aviation programs and nearly 250 local high school students also attended the concurrent sessions and workshops on all facets of women in aviation. Topics included historical perspectives, interview techniques, careers in corporate aviation, and educating the general public about women in aviation.



Lin Modestino, an FAA Flight Inspection and Procedures Branch manager at the FAA Academy in Oklahoma City and a U.S. Army Reserve Lieutenant Colonel, meets General "Chuck" Yeager at the Women in Aviation Conference.

Perhaps the highlight of the conference was the reaction of the ebullient Jodi Lynn Osborne, a jet pilot and Masters degree (aeronautics) candidate from Middle Tennessee State University, who was awarded the Women in Aviation scholarship in the form of a B-747-400 type rating. Shrieking in joy and disbelief, Ms. Osborne, who is also working on her A&P, won over the crowd with her enthusiasm and dedication toward flight.

Next year's Women in Aviation Conference will be March 13-15, 1997 at the Hyatt DFW in Dallas, TX. For additional information contact Women in Aviation, International, P. O. Box 188, 1 Chamber Place, Suite A, Dayton, OH 45402; (513) 225-9440.

AOPA AND GAMA ANNOUNCE GA TEAM 2000 FOR INDUSTRY REVITALIZATION

The General Aviation Manufacturers Association (GAMA) and the Aircraft Owners and Pilots Association (AOPA) have announced the formation of GA TEAM 2000, a national, industry-wide program for revitalization of the U.S. pilot population. General aviation businesses, associations, and organizations have been invited to join in an alliance to attract more pilots.

Said GAMA President Ed Stimpson, "The industry must come together in a new and innovative effort, capitalizing on this unique moment following product liability reform and the increasing production of light aircraft."

"General aviation's future depends on returning to at least 100,000 student starts a year," said AOPA President Phil Boyer. "Renewing the pipeline of new pilots is the keystone on which all other industry revitalization needs will hinge."

Differing from previous efforts, GA TEAM 2000 will design programs targeted according to research completed by GAMA's Piston Engine Research Aircraft Revitalization Committee and to strategic planning by AOPA. Programs will be launched early in 1997 to heighten the public's interest in becoming a pilot. Marketing and awareness programs will be targeted to specific audiences and will reach about one in every 250 Americans.

For further information, contact Drew Steketee of AOPA at (301) 695-2156 or Shelly Snyder of GAMA at (202) 393-1500.

From the Editor:

People are called to public service by many different voices. Mine was John F. Kennedy's 1961 Inaugural Address. In April 33 public servants—civil service, military service, and private industry—perished on a mission of public service to war-torn Bosnia. Said President Clinton when the bodies of those killed in the crash of a military B-737 in Croatia returned home:

"These 33 people loved America enough to use what is best about it in their own lives to try to help solve a problem a long, long way from home....That is a noble thing."

The public servants of the Aviation News Staff and the Aviation Safety Program honor the memory of 33 fellow public servants and American patriots:

Staff Sergeant Gerald Aldrich, Ronald Brown, Duane Christian, Barry Conrad, Paul Cushman III, Adam Darling, Captain Ashley James Davis, Gail Dobert, Robert Donovan, Claudio Elia, Staff Sergeant Robert Farrington Jr., David Ford, Carol Hamilton, Kathryn Hoffman, Lee Jackson, Steven Kaminski, Kathryn Kellogg, Technical Sergeant Shelly Kelly, James Lewek, Frank Maier, Charles Meissner, William Morton, Walter Murphy, Lawrence Payne, Nathaniel Nash, Leonard Pieroni, Captain Timothy Schafer, John Scoville, I. Donald Terner, P. Stuart Tholan, Technical Sergeant Cheryl Ann Turnage, Naomi Warbasse, Robert Al Whittaker

C. Alfred "Chief" Anderson
1907 - 1996

A self-taught pilot who made history in 1941 by flying then First Lady Eleanor Roosevelt, C. Alfred "Chief" Anderson's life was a long series of accolades and awards. Chief was the instructor and mentor for the world-renown Tuskegee Airmen of World War II, all-black aviation units who fought on two fronts—one here at home to get to fly and one in Europe and Africa against the Nazis.

Chief's last flight occurred on April 13 when he transitioned from this life due to cancer.

Chief was smitten with airplanes at the age of six and at eight ran away from home looking for rides. As a teenager, however, racism kept him from formal lessons. Undeterred, he borrowed money from friends and relatives, bought his own plane, and taught himself how to fly. By 1932 he had received an airline transport rating, then the highest level of pilot certification (now an airline transport pilot certificate).

In 1938 he was recruited to start civilian pilot training programs at Tuskegee Institute and later headed up the military effort there. Chief continued to instruct young people at Tuskegee well into his 80's and was a familiar sight at the Tuskegee airport where he based his beloved plane, "Echo." Among his students, Chief numbered General David "Chappie" James, General Benjamin O. Davis, USAF Thunderbird pilots, other USAF pilots, and the current mayor of Tuskegee, the Honorable Johnny Ford. Chief's last two students became the first African-American pilots in the Alabama Air National Guard.

Family and friends have established the C. Alfred "Chief" Anderson Historical Preservation Fund, c/o Tuskegee University, P. O. Box 704, Tuskegee, AL 36088.

Chief's last set of wings will take him the highest.

Charlie R. Hillard
1938 - 1996

How ironic it seems to fly some of the most dangerous maneuvers for 25 years without a scratch then to die in what many say is an inglorious ground accident. Charlie R. Hillard, died April 18 when his World War II-era Hawker *Sea Fury* flipped over on its back while rolling out after landing. Charlie had just successfully completed an aerobatic exhibition at the Sun 'n Fun Fly-In in Lakeland, FL. FAA was on the scene, and an investigation is on-going.

The 58-year-old Hillard was a Fort Worth, TX car dealer and world-famous stunt pilot. He was the pilot for aerial scenes in many movies, but Charlie is perhaps most famous for his 25-year leadership of the Eagles Aerobatic Flight Team that included Tom Poberezny and Gene Soucy. The team flew rainbow-hued Christian Eagle biplanes in trademark performances designed so that spectators would get a thrill from what appeared to be near mid-air collisions, though the graceful maneuvers were carefully choreographed for safety. The Eagles broke up last November, and Charlie continued as a solo act in the *Sea Fury*.

I was a nervous, new writer (and pilot) for this magazine in 1980 given the task to interview Charlie Hillard. He was charming, self-effacing, and comforting to a "cub" reporter who stammered her questions and blushed alot. After seeing so many airshows, sometimes it can get boring, but the Eagles with Charlie Hillard was one act I always stopped to see.

Contributions are being accepted in Charlie's memory by either the Aviation Heritage Museum, Box 821, Fort Worth, TX 76101 or by the EAA Aviation Foundation, Box 3065, Oshkosh, WI 54903-3065.

Charlie lifted us all up on his Eagle's wings.

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